ISSUE 18 OCT 2016

REDEEM

Quarterly Newsletter

Electrical & Electronics Department

SSN College of Engineering

INNOVATION CENTRE

Solar Powered Electric Vehicle

INVENTE 2K16

THE TWO DAY TECHNICAL SYMPOSIUM

DIY PROJECTS

Learn to make a mini hand drill

From HoD's Desk

I am happy that NBA has given our M.E Programme in Power Electronics and Drives accreditation for full five years effective till 30.06.2021. This is the maximum period for which accreditation is granted by NBA. It is a recognition of achievements of our students and faculty. I thank everyone for their effort to achieve this status. Our alumni and industry representatives have always been a source of great support to our development activities.

Association of EEE (AEEE) was inaugurated on 19.08.2016. AEEE has successfully coordinated and organized the symposium INVENTE-2016.

A 3kW Solar Powered electric vehicle was developed in the Department and demonstrated successfully during the inaugural of SSN innovation and Incubation Centre.

I congratulate four of our final year students, Sathyanarayana S, Ragunandhan B, Sujaveena P and Naveen Raj for participating and winning prize money of Rs.2,00,000 in BOSCH Hackathon competition, during September 2016.

I congratulate Mr.Mohanakrishnan of ME (PED) for being selected as Intern at Danfoss Industries Pvt Ltd.

Our department received 29 internally funded Student projects in this academic year. I congratulate faculty members who have secured Internal Funded projects for this year and I wish successful completion of the projects.

Our department actively participated in the Research meetings of the research groups 'Energy' and 'Material'.

With the constant effort of our editorial team, this newsletter provides wide coverage to our activities.

The department will continue to strive for excellence in teaching and research.

PREFACE

To fill free time with activities that require concentration, that increase skills, that lead to a development of the self, is not the same as killing time by watching television or other passive entertainments. Although both strategies might be seen as different ways of coping with the same threat of chaos, as defences against ontological anxiety, the former leads to growth, while the latter merely serves to keep the mind from unravelling. A person who rarely gets bored, who does not constantly need a favourable external environment to enjoy the moment, has passed the test for having achieved a creative life. Others lack the complex skills that will help them to survive in a competitive, information intensive environment and eventually they never learn how to enjoy living.

They do not acquire the habit of finding challenges that bring out hidden potentials for growth. Too many adults feel that once they have hit twenty or thirty—or certainly forty—they are entitled to relax in whatever habitual grooves they have established. They have paid their dues, they have learned the tricks it takes to survive, and from now on they can proceed on cruise control. Equipped with the bare minimum of inner discipline, such people inevitably accumulate entropy with each passing year. Career disappointments, the failure of physical health, the usual slings and arrows of fate build up a mass of negative information that increasingly threatens their peace of mind. If a person does not know how to control attention in solitude, he will inevitably turn to the easy external solutions: drugs, entertainment, excitement—whatever dulls or distracts the mind. Teenagers without strong family ties can become so dependent on their peer group that they will do anything to be accepted by their peers.

We are all familiar with the psychological mechanisms. Well-being depends on many things going right in your nervous system. You can't attend to them one by one; infinitely too many processes are happening in the blink of an eye.

Despite this complexity, you can begin to pay attention to subtle cues. In the Indian tradition, there are three classes of subtle cues wrapped inside every experience. Tanya: the qualities or aspects of My experience, Rasa: the flavor of the experience, Bhava: the mood or emotional tone of the experience. Let's sees how these are packaged into every experience. Imagine that you are on vacation sitting at the beach. The qualities of the experience would be your sense of the warm sun, the sound of the surf, and the swaying palm trees - the composite sensation of being on a beach. The flavour of the experience is subtler. In this case, let's say it's sweet, relaxing experience that makes your body feel as if it is flowing into the whole beach scene. Finally, the mood of the experience isn't determined by either of the above. If you are lying on the beach, feeling lonely or having fight with your spouse, the beach isn't the same as it is to someone who is on a blissful honey moon. Well-being is created at the subtle level.

Therefore, as raw data stream into your brain through the five senses, what turns them into something nourishing or something toxic depends on the quality, flavour, and emotional mood that you add. We aren't discounting the brain, since of course it is a vital part of the mind-body feedback loop. There are neural networks that predispose you to have it positive or negative reaction automatically. But neural networks are secondary. What is primary is the person who is interpreting every experience as it is happening with power of instant and sustained focus. We must learn to rely on the most holistic power we have, which is feeling. Feeling comprises the subtle underpinning of everything.

I choose... to live by choice, not by chance; to make changes, not excuses; to be motivated, not manipulated; to be useful, not used; to excel, not compete. I choose self-esteem, not self pity. I choose to listen to my inner voice, not the random opinion of others." ~ **Isabel Bauche**

PAPER PUBLICATIONS

Dr.R.Seyezhai, ASSP/EEE and M.S.Rajan published a paper titled, "Capacitor Voltage Balancing Control for Modular Multilevel Cascaded Inverter Based on Phase Shifted Pulse Width Modulation Technique", Advances and Natural Applied Science, 2016, pp.205-214. (AU,Annx.-II)

Dr.R.Seyezhai, ASSP/EEE and A.Bharathi Sankar published a paper titled, " Simulation and Implementation of Solar Powered Electric Vehicle", Journal of Circuits and Systems, May 2016, pp.643-661. (Updated Annx.-1)

Dr.R.Seyezhai, ASSP/EEE, M.Sudhakaran (Research Scholar) and P.Ilatchiya (PG Student, GT Jain Engineering college, Vellore) published a paper titled, Power Management And Control For Domestic Appliances Using GSM And Android Application", International Journal of Emerging Technology in Computer Science & Electronics (IJETCSE) ISSN: 0976-1353 Volume 21 Issue 3 – April 2016.

Dr.R.Seyezhai, ASSP/EEE, M.Sudhakaran (Research Scholar) published a paper titled, " Fault Identification and Diagnosis of Induction Motor Using Neural Networks", Middle-East Journal of Scientific Research 24 (6): 2009-2012, 2016. (AU, Annx.-II)

Dr.R.Seyezhai, ASSP/EEE and P. Vaishnavi (passed out PG Student), published a paper titled, Investigation and Development of FPGA Based Multi-Level Inverter with Reduced Number of Switches for PV Applications", Caspian Journal of Applied Sciences Research 4(8), pp. 9-18, 2015. (Indexed in Thomson Reuter)

Dr.R.Seyezhai, ASSP/EEE and V.Aarthi (Passed out PG Student) published a paper titled, "Investigation of Interleaved Boost Converter with Voltage multiplier for PV with Fuzzy MPPT", Electrical & Computer Engineering: An International Journal (ECIJ), March 2016, Volume 5, Number 1, ISSN: 2201-5957.

Dr.R.Seyezhai, ASSP/EEE, M.Sudhakaran (Research Scholar) published a paper titled, " Design And Simulation of Single Phase Trinary Multilevel Inverter For Photovoltaic Applications International Journal Of Emerging Technologies And Applications, In Engineering, Technology And Sciences (IJ-ETA-ETS), ISSN: 0974-3588 | JAN 2016 | Volume 9 : Issue 1.

Dr.R.Seyezhai, ASSP/EEE and A.Inba Rexy (Research Scholar) published a paper titled, " Investigation of Current Control Techniques of AC-DC Interleaved Boost PFC Converter" Circuits and Systems, April 2016, 7, 307-326. (Updated Annx.-1)

Dr.R.Deepalaxmi, ASSP/EEE, C.Preethi, V.Preethi and R.Priyadharshini (passed out BE EEE students) published a paper entitled, "Design and development of prototype model of long duration impulse current generator" in International Journal of Advanced Scientific research and Management (IJASRM) , Vol 1, Issue 6, PP 70-74, September 2016. [ISSN 2455-6378; Publication impact factor (PIF)- 1.152]

Dr.R.Seyezhai, ASSP/EEE and M.Tamilarasi, (Full-time scholar) published a paper titled, " A review of optimization algorithms for the modeling of proton exchange membrane fuel cell" in the AIP Journal of Renewable & Sustainalble Energy, 2016. (Indexed in Thomson Reuters- AU Annexure-1)

V.Rajini Prof/EEE, W.Abitha memala(Research scholar) , published a paper titled" Motor current signatures and their envelopes as tools for fault diagnosis",Intelligent Automation and soft computing , Taylor and Francis , ISSN: 1079-8587 (Print) 2326-005X (Online), DOI:10.1080/10798587.2016.1225338

Dr.R.Seyezhai, ASSP/EEE and V.Chamundeeswari(part-time scholar) published a paper titled, " Comparative Analysis of Analog and Digital Controllers for Negative Output Superlift Luo Converter (NOSLC)", Circuits and Systems, 2016, 7, 1689-1700. (Updated List AU).

Dr.R.Seyezhai, ASSP/EEE and Chitra vallavan (part-time scholar) published a paper titled, "Design and Experimentation of FPGA-Based Soft-Switched Interleaved Boost Converter for Telecommunication System", Circuits and Systems, 2016, 7, 1689-1700. (Updated List AU).

Dr.R.Seyezhai, ASSP/EEE and V.Aarthi (Passed out PG Student) published a paper titled, "Simulation And Implementation Of Ac-Dc Interleaved Boost Converter With Voltage Multiplier For PHEV", ICTACT Journal on Microelectronics (IJME), 2016.

Saravanan P AP/EEE has published a paper titled, "Design and development of computational intelligence for enhanced adaptive cruise control using Arduino", Applied Mechanics and Materials, Vol.852, pp:782-787, ISSN: 1662-7482

Saravanan P AP/EEE has published a paper titled, "Low cost battery operated vehicle using joystick control for physically challenged", Applied Mechanics and Materials, Vol.852, pp:788-793, ISSN: 1662-7482

PAPER PRESENTATION

Dr. U. Shajith Ali ASSP/EEE presented a paper titled "Impedance source converter for photovoltaic stand-alone system with vanadium redox flow battery storage," in International Conference on Processing of Materials, Minerals And Energy - 2016 at PACE Institute of Technology & Sciences, Ongole, Andhra Pradesh on 29th and 30th of July.

Thiyagarajan V., AP/EEE and Somasundaram P., presented a paper titled "Analysis of Photovoltaic fed HERIC Inverter for different PWM techniques", in the International Conference on Novel Issues and Challenges in Science and Engineering (NICSE'16) organised by Noorul Islam University, Kumaracoil on 28th and 29th of August.

Dr.R.Seyezhai, ASSP/EEE, V.Aishwarya, Kavitha & R.Kaviya, (III Yr.EEE, B) presented a paper titled, " Investigation of Boost and Interleaved Boost switched mode rectifiers for power factor correction" in the National Conference on Recent Innovations in Science, Engineering and Technology held at Chennai organize d by IRAJ Research Forum.

S.Harika (II YR.M.E.,PED) presented a paper titled, "Investigation of Interleaved voltage source Inverter" under the guidance of DR.R.Seyezhai, in the National Technical Symposium held at SVCE, Chennai.

BOOK PUBLICATIONS

Dr.R.Deepalaxmi (Assoc.Prof./EEE), Dr.V.Rajini (Prof/EEE) and Dr.C.Vaithilingam contributed a chapter entitled "Electron Beam Irradiation Effects on Dielectric Parameters of SiR-EPDM Blends " in the book under the working title " Radiation Effects in Materials", InTech – open science, open minds, Croatia, Europe, Chapter 4, PP.93-108, July 2016. ISBN 978-953-51-4718-3.

Book chapter Published- V.Rajini (Prof/EEE), R.Deepalaxmi (Asso.Prof/EEE), " Radiation Effects in Materials", ISBN 978-953-51-4718-3, Intech publishers

REVIEWS

Dr. R. Ramaprabha, Assoc. Prof./EEE reviewed two technical papers for "IET-Renewable Power Generation", June 2016

Dr Mrunal Deshpande Assoc.Prof./EEE reviewed a paper for IEEE Industrial Electronics and Applications Conference, IEACon 2016 Malaysia

Dr. R. Ramaprabha, Assoc. Prof./EEE reviewed a paper for International Journal of Photo energy, Hindawi Publications -26.07.2016

Dr Mrunal Deshpande, Assoc.Prof./EEE reviewed a paper for International Journal of Electromagnetics and Applications" from Scientific & Academic Publishing, USA.

Dr. R. Ramaprabha, Assoc.Prof./EEE reviewed a technical paper for "IET-Renewable Power Generation", August 2016 – 02.08.2016

Dr.R.Deepalaxmi ,Assoc.Prof./EEE)reviewed the paper titled "Comparison of rheological, cure, thermal, dielectric and mechanical properties of ethylene propylene diene monomer (EPDM)/barium titanate (BaTiO3) reinforced by two different layered fillers" for the Elsevier Journal: Composites Part B

Dr. R. Ramaprabha, Assoc.Prof./EEE reviewed papers for the following journals: Energy systems (Springer publications), IET RPG, IEEE Journal of Emerging and Selected Topics on Power Electronics, International Journal of Electronics (Taylor & Francis Publishers) -10.09.2016

Dr Mrunal Deshpande Assoc.Prof./EEE reviewed a paper for American Journal of Applied Sciences.

MEETINGS

Dr.R.Seyezhai, Assoc.Prof./EEE attended the meeting regarding the proposal preparation for Atal Incubation Centre on 6th July.

Dr. R. Ramaprabha, Assoc.Prof./EEE conducted synopsis meeting for her part-time research scholar Ms. S. Malathy, AP/EEE on 10.08.2016 at 11.30 a.m. at EEE seminar hall.

Dr. R. Ramaprabha, Assoc.Prof./EEE attended Anna University Doctoral committee meeting at Jerusalem College of Engineering, Chennai on 24.08.2016 as DC member.

Dr. R. Ramaprabha, Assoc.Prof./EEE attended DC meeting at VIT University, Chennai Campus, Chennai on 07.09.2016.

WORKSHOPS

SIMULATION WORKSHOP ON POWER ELECTRONICS &ELECTRIC DRIVES

Department of EEE Organized Two days "Simulation Workshop on Power Electronics & Electric Drives" during Aug 05-06, 2016.

Conveners: Dr. V. Kamaraj, Dr. R. Seyezhai, Dr. R. Ramaprabha & Dr. M. Balaji

Number of Participants: 26

Sessions & Speakers: 2 sessions/day

- Session I: Hands-on Practice using PSpice for Power Electronics by Dr. R. Ramaprabha, Asso. Prof./EEE
- Session II: Hands-on Practice using PSIM for Power Electronics & Drives by Dr. R. Seyezhai, Asso. Prof./EEE
- Session III: Hands-on Practice using MagNet for Electric Drives by Dr. M. Balaji, Asso. Prof./EEE

Session IV: Hands on Session : Modeling of Renewable Energy Sources, Advanced DC-DC Converters & Multilevel Inverters by Dr. R. Seyezhai, Dr. R. Ramaprabha & Dr. M. Balaji

WORKSHOP ON PROGRAMMING WITH PIC MICROCONTROLLER

Department of EEE Organized a Hands on Workshop on "Programming with PIC Microcontroller" on August 20, 2016 under the banner of IEEE student branch. 30 UG students have been participated in this workshop and get benefitted with hands-on practice. The gathering was addressed by Dr. R. Ramaprabha, Associate Professor, SSN-IEEE Student branch counselor. The event began at 08.30 am and ended at 01.00 p.m.

Convener: Dr. R. Ramaprabha, Asso. Prof./EEE

Student Coordinators: Mr. D. Kavin & Mr. P. Arjun

Number of Participants: 30

Speaker: Ms. G. Ramya (Full-time Research Scholar, EEE/SSNCE) & Mr. Mohana Krishnan (PG Student, EEE/SSNCE)

The hands-on training session includes the interfacing of PIC controller and generation of different pulses for power electronic converter circuits.

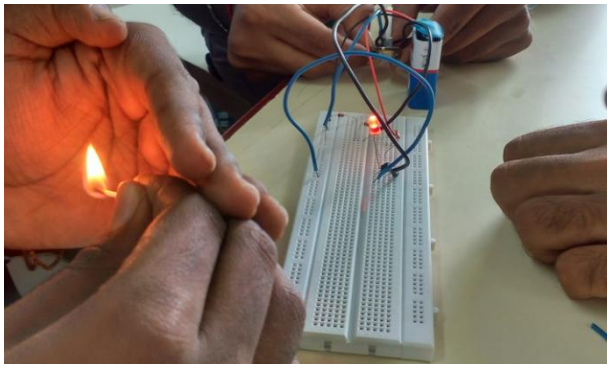
HANDS-ON WORKSHOP ON BASIC ELECTRONICS

Dr. R. Ramaprabha (Assoc. Prof.) has arranged a Hands-on Workshop on Basic Electronics under SSN-IEEE student branch for the benefit of I, II, & III year UG students of EEE on September 17, 2016.

- Convener: Dr. R. Ramaprabha
- Coordinators: Kavin D (III Year/EEE), Arjun P (III Year/EEE)
- No. of participants: 27 teams (each team comprises 2/3 members)

Hands-on trainers: Aravind Kumar R, Kapildev Kumar A,Balakrishnaa A V, Lalith Raj S & Anirudh C (III Year/EEE students)

The workshop started with basic introduction of electrical components – breadboards and various sensors and Heat sensors- Thermistor, Bimetallic strip and using a transistor and its applications in day-to-day life. The participants also took a chance to work on the construction of a real time heat sensor. This was followed by description about light detecting circuit using phototransistor,photodiode and LDR.The working of 555 Timer was also discussed in this workshop.



WORKSHOPS ATTENDED

Thiyagarajan V., AP/EEE, attended workshop titled "Basics of Solar PV Systems and components", organised by the department of ECE, CEG, Anna University during June 3, 2016 and June 4, 2016.

Dr. Kamaraj, HoD EEE and Dr. Ranganath Muthu Prof/EEE attended the NAAC Awareness Seminar/ Training Programme on 'Quality System in Higher Education' at Anna University, Chennai – 600025 on 29th and 30th September.

Dr.R.Seyezhai, ASSP/EEE attended the IEEE -PELS Distinguished Lecture Program at VIT University, Chennai and addressed about the IEEE-PELS activities,Madras Section on 9th July.

GUEST LECTURE

Dr. R. Ramaprabha, Assoc. Prof./EEE and Ms. S. Malathy, AP/EEE arranged a guest lecture on "Power Converters for PV Applications" for the benefit of the students of EEE under the banner of SSN IEEE Student Branch on 17.08.2016 from 10.30 am to 12.30 pm. The resource person is Dr. M. Prabhakar, Associate Professor, SELECT-VIT, Chennai campus. The number of participants is around 21.

PROJECT WORK

The project titled, ""Design of a Multi colour Pen Using Sunlight" by P. Arjun and B. V. Arjun (III Year EEE Students) under the guidance of Dr. R. Ramaprabha, Asso. Prof./EEE has been shortlisted for showcasing the inaugural for Innovation Centre. As a part, they presented their project progress before review committee with President and Principal on 12.08.2016. They also presented their work again on 29.08.2016 before the committee in presence of Dr. V G Idichandy, Head/Innovation centre, SSNCE.

Ms. M. Vijayalakshmi, Full-time Research Scholar/ EEE (Dr. R. Ramaprabha, Asso. Prof./EEE as Scientist Mentor) has received revised sanction of Rs. 21.45 lakhs from Rs. 20 lakhs for the year 2015-16 for the project titled, "Design and Development of Flywheel based Power Conditioning System for a Renewable energy fed Micro grid". Also the second installment has been received. The candidate has been presented the progress of the project with utilization before the Subject Expert Committee on Engineering Technology on August 13, 2016 at Punjab Technical University, Mohali Campus, Mohali at 9.00 am.

Dr.R.Deepalaxmi ASSP/EEE, Dr.V.Rajini (Prof/EEE) presented their project proposal titled "Effect of fillers on electro-mechanical performance of polymeric insulating material blends" for Rs. 8.00 lakhs under faculty research project proposal funding scheme in SSNCE before the project evaluation committee.

Dr.R.Seyezhai, ASSP/EEE and Ms.D.Umarani, AP/EEE presented the project submitted for the internal staff project funding at SNNCE on 14th September.

Research scholar R. Jeyapradha under the supervision of Dr.V.Rajini , presented her project before the selection committee under DST-WOSA scheme at Punjab on 12th of August.

Dr.R.Deepalaxmi (Asso.Prof/EEE) presented the status of selected student projects by innovation center. The project was done by C.Preethi, V.Preethi and R.Priyadharshini (passed out EEE students) on 12th of August.

PROJECT PROPOSALS APPLIED

Dr.R.Seyezhai, ASSP/EEE submitted a project proposal to UGC-DAE -CSR for Rs.7 Lakhs.

Dr. R. Ramaprabha, Assoc. Prof./EEE and Ms. S. Malathy AP/EEE have applied project proposal to Department of Science and Technology (EMRF) on 25.07.2016.

Dr.R.Seyezhai, ASSP/EEE and D.Umarani, AP/EEE submitted a project proposal to DST-SERB for Rs.55 Lakhs.

Dr.R.Deepalaxmi (Asso.Prof/EEE), Dr.V.Rajini (Prof/EEE) submitted a proposal titled "Effect of fillers and gamma irradiation on electro-mechanical performance of polymeric insulating material blends and cables" for Rs. 33.00 lakhs under Extra Mural Research (EMR) funding scheme in DST-SERB.

Mr.Periyandavar of M/S Euro Process Automatik has partnered with Dr.V.Kamaraj Prof/EEE, Dr.M.Balaji Assoc. Prof/EEE and Mr.V.S.Nagarajan AP/EEE in submitting a proposal titled, "Design and development of energy efficient permanent magnet assisted reluctance motor drives for pump applications" under DST project scheme for funding Industry relevant R&D. The total project cost is Rs. 20 lakhs with the share of M/S Euro Process Automatik being 50% of the project cost.

Dr.R.Deepalaxmi (Asso.Prof/EEE), Dr.V.Rajini (Prof/EEE) submitted a proposal titled "Effect of fillers on electro-mechanical performance of polymeric insulating material blends" for Rs. 8.00 lakhs under faculty research project proposal funding scheme in SSNCE.

Mundla Kundana Ramyasree, B. Sai meghana , Veluru Sai Manasa (Final year EEE A) under the guidance of Mrunal Deshpande (Asso.Prof/EEE) submitted a proposal titled "Design of solar powered ploughing and seed sowing machine " for Rs.15,000/- under student research project proposal funding scheme in SSNCE.

Chozha Nangai.V.P., S. Muthamil Selvan (III yr EEE) under the guidance of Dr Mrunal Deshpande(Asso.Prof/EEE)submitted a proposal titled "Interleaved boost converter for farm irrigation system" for Rs.8,000/- under student research project proposal funding scheme in SSNCE.

K.A. Akash ,T. Aravinthraj , S.R. Dharshini (III-Year EEE) under the guidance of Dr Mrunal Deshpande(Asso.Prof/EEE)submitted a proposal titled "Analysis and design of soft-Switching converter for switched Reluctance motor drive " for Rs.10,000/- under student research project proposal funding scheme in SSNCE.

Dr.Mrunal Deshpande(Asso.Prof/EEE), submitted a proposal titled "Design and development of switched reluctance motor drive with minimum torque ripple " for Rs. 4.00 lakhs under faculty research project proposal funding scheme in SSNCE.

D.Janani, B.Kaviya (Final year EEE A) under the guidance of Dr.R.Deepalaxmi (Asso.Prof/EEE) submitted a proposal titled "Modelling and implementation of impulse current measurement circuit" for Rs.20,000/- under student research project proposal funding scheme in SSNCE.

The following student projects have been submitted for internal funding under the guidance of Dr.M.Balaji Assoc.Prof/EEE

1. B Raghu Nandhan .P. Rohit Rao U.V. Yokesh Ram (IV Year) "Design and implementation of switched reluctance motor drive with integrated charging"

2. S. Bavani (M.E(PED))"Design and Implementation of Fault Tolerant Converter Topology for switched reluctance motor Drive"

3. P.S. Suvetha(M.E(PED))"Design and Implementation of coupled inductor Bidirectional DC-DC Converter"

Ms. Kanimozhi, II Year M.E. (PED), Mr. Mohana Krishnan II Year M. E. (PED) and D. Kavin, B. Arun Prasaath & K. Agil, III Year B.E. EEE have submitted project proposal for student funding under the guidance of Dr. R. Ramaprabha, Asso. Prof./EEE.

Dr Mrunal Deshpande, ASSP/EEE presented her project proposal titled "Design and development of switched reluctance motor drive with minimum torque ripple" for Rs. 4.05 lakhs under faculty research project proposal funding scheme in SSNCE before the project evaluation committee on 14th September.

D.Janani, B.Kaviya (Final year EEE A) and S.Aishwarya, S. Dharshini Bala (Third year EEE A) under the guidance of Dr.R.Deepalaxmi (Asso.Prof/EEE) presented their project proposal titled "Modelling and implementation of impulse current measurement circuit" for Rs.20,000/- (under student research project proposal funding scheme in SSNCE) before the project evaluation committee on 27th september

M.Kundana Ramyasree, B.Sai Meghana and V. Sai Manasa IV yr/EEE students under the guidance of Dr.Mrunal Deshpande ASSP/EEE presented their project proposal titled "Design of Solar powered ploughing and seed sowing machine (Agibot)" for Rs.15,000/- (under student research project proposal funding scheme in SSNCE) before the project evaluation committee on 27th September.

V.P.Chozha Nangai and S.Muthamil Selvan , IIIyr/EEE students under the guidance of Dr.Mrunal Deshpande ASSP/EEE presented their project proposal titled "Interleaved boost converter for farm irrigation system" for Rs.8,500/- (under student research project proposal funding scheme in SSNCE) before the project evaluation committee on 27th September.

Ms. M. Kanimozhi, II Year M.E. (PED), Mr. M. Mohana Krishnan II Year M. E. (PED) and D. Kavin, B. Arun Prasaath & K. Agil, III Year B.E. EEE have presented project proposal for student funding under the guidance of Dr. R. Ramaprabha, Asso. Prof./EEE and Presented at SSN Research Centre on 27th September.

Akash.K.A, Aravinthraj.T and Dharshini.S.R III yr/EEE students under the guidance of Dr.Mrunal Deshpande ASSP/EEE presented their project proposal titled "Analysis and design of soft switching converter for switched reluctance motor drive" for Rs.12,000/- (under student research project proposal funding scheme in SSNCE) before the project evaluation committee on 27th September.

PRESENTATIONS

Ms. S. Malathy, AP/EEE has presented research seminar on the topic "Enhancement techniques to improve the energy yield of partially shaded photo voltaic system" at 1:30 pm on 16.07.2016 in EEE Seminar hall. She is Part-time Research Scholar of Dr. R. Ramaprabha, Assoc. Prof./EEE

Dr. R. Ramaprabha, Assoc. Prof./EEE and Dr.R.Seyezhai, ASSP/EEE presented their research activities and roadmap on 18.07.2016 at SSN Research center in Energy Researchers meeting headed by Dr Barua.

Dr.V.Rajini, Professor/EEE presented the progress of her MNRE funded project before the second project monitoring committee from MNRE, New Delhi on 19th july.

Dr.R.Seyezhai, ASSP/EEE conducted the Synopsis for the research scholar Ms. V.Chamundeeswari at SSNCE on 10th September.

PHD INFORMATION

Dr. Ranganath Muthu Prof/EEE – Ph.D. Viva-voce Examination successfully defended by PhD scholar Dr. M. Pandikumar on 14th September.

A.Bharathi Sankar (Full-time scholar) submitted the Ph.D. thesis after the scrutiny report under the guidance of DR.R.Seyezhai.

Dr. R. Ramaprabha, Assoc. Prof./EEE conducted confirmation meeting for her part-time PhD scholar M. Shanmugha Vadivu on 29.09.2016.

Dr. R. Ramaprabha, Assoc. Prof./EEE attended confirmation meeting for the part-time PhD scholar of Dr. M. Balaji, Assoc. Prof./EEE as a DC member on 30.09.2016.

OTHER ACTIVITIES

Dr.R.Seyezhai, ASSP/EEE received the Outstanding Faculty Award in Power Electronics by the Venus International Foundation in the Academic meet 2016 held at Hotel Green Park, Chennai on 9th july.

Dr. R. Ramaprabha, Assoc. Prof./EEE has submitted equipment list for PCB fabrication facilities for Atal Incubation Centre, SSNCE

Dr.V.Rajini, Professor /EEE is Selected as reviewer for TENCON -16 conference

Dr Ranganath Muthu Prof/EEE was member of the Ph.D. Viva-voce Board for the T. Magesh at R.M.K. Engineering Colleg held on 21st july.

Dr.V.Rajini, Professor /EEE was the Interview committee member for 2016 admissions

Dr.R.Seyezhai, ASSP/EEE has been nominated for the scientific committee for the 1st International Conference on Power Engineering Computing and Control, PECCON'17 to be held at VIT University, Chennai during March 2017.

G.R.Venkatakrishnan AP/EEE gave a Expert Lecture on Control Systems in Thangavelu Engineering College on 8th September.

PROGRAMS CONDUCTED

IEEE MEMBERSHIP DRIVE PROGRAM

The SSN-IEEE Student Branch kicked off the half yearly term with a Membership Drive organized on the 20th of August, 2016, in SSN College of Engineering. The event had an overwhelming response of more than 200 participants, with many of them coming from the more enthusiastic group of first years. The event was hosted by Mr.Vishal SB, current Chairperson and Mr. D. Kavin, current Secretary of SSN-IEEE Student Branch. The event was graced by Dr. R. Ramaprabha, Student Branch Counselor of SSN-IEEE Student Branch and Dr. S. Radha, Student Society Counselor of SSN-IEEE COMSOC Society. A lot of information was given regarding IEEE and the benefits of being an IEEE Member, and also about how the SSN-IEEE Society has grown over the years, and why it can be a feather on the cap for the enthusiastic youngsters if they join IEEE. The event received a very warm response, and was found to be enlightening and interesting to the young students, who are eager to be a part of something interesting.

INAUGURATION OF AEEE

Inaugural function of the Association of Electrical and Electronics Engineers for the academic year 2016-17 was held on 19.08.2016 in the Central Seminar Hall (ECE Block) of our college at 11.00AM.

Mr. Vineet Vijayaraghavan, Founder & Editor, Panchabuta renewable & Cleantech in India, Chennai was the Chief Guest and inaugurated AEEE.

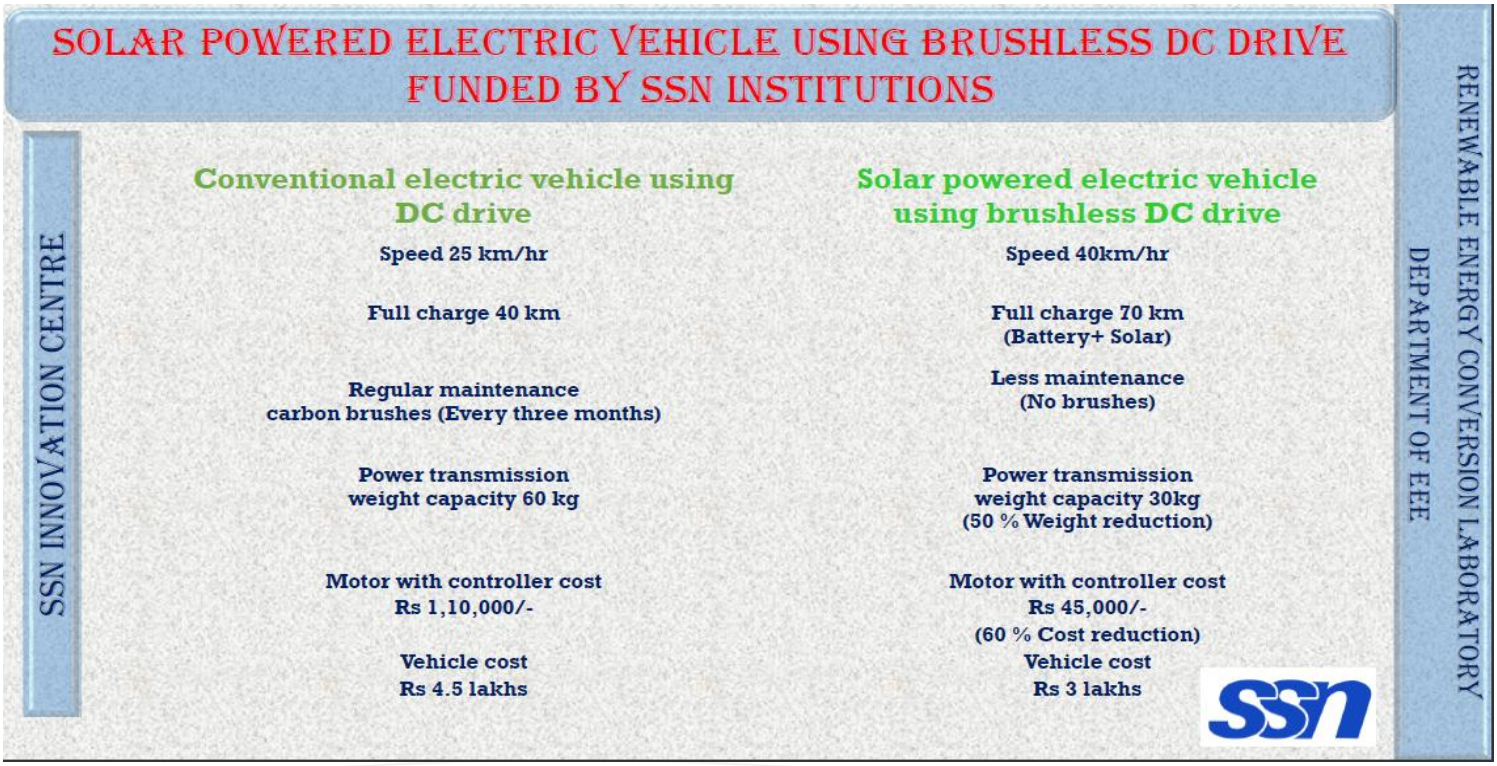
Welcome Address was given by Dr. V. Kamaraj HOD/EEE.

Dr.N.Pandiarajan, Professor /EEE, introduced the chief guest.

DEMONSTRATION OF SOLAR POWERED ELECTRIC VEHICLE

A 3kW solar powered electric vehicle was developed using BLDC drive by research scholar A.Bharathi Sankar under the supervision of Dr.R.Seyezhai funded by SSN institutions.

This model was demonstrated during the inaugural of SSN Innovation and Incubation centre to Dr.Shiv Nadar,Founder SSN Institutions.



ENTREPRENEURSHIP AWARENESS CAMP

Dr.R.Seyezhai, ASSP/EEE and Mr.Amit Tyagi conducted the three-day Entrepreneurship Awareness Camp during Sept. 19-21, 2016 sponsored by Entrepreneurship Development Institute of India, Ahmedabad (EDII).

The camp was inaugurated by our Principal Dr.S.Salivahanan. The event was sponsored by the entrepreneurship Development Institute of India,Ahmedabad. Around 70 students participated in this camp for all departments. A visit to the NIOT,Chennai was arranged during the second day of the camp.

PROUD MOMENTS

RECIPIENTS OF BEST TEACHER AWARD

Dr.R.Seyezhai, ASSP/EEE and Dr. R. Ramaprabha, Asso. Prof./EEE were honoured with the best teacher award during the teachers' day celebration.

STAFF ACHIEVEMENT

Mr. M Pandikumar successfully defended his thesis in the Ph.D. Public Viva-voce Examination on 14th September, under the supervision of Dr. Ranganath Muthu, Prof/EEE. We congratulate him.

STUDENT ACHIEVEMENT

Four of our final year students, Sathyanarayana S, Ragunandhan B, Sujaveena P and Naveen Raj participated in the BOSCH hackathon competition and won a prize money of Rs.2,00,000 during September 2016.

invente.

DISCOVER YOURSELF

The two day techfest

For the first time since its inception , Sri Sivasubramaniya Nadar College of Engineering introduced its first ever Two day Technical fest -INVENTE V1.0 on 9th September 2016 after months of meticulous planning by the students and faculty members of the college. This two day technical fest kick started with its inaugural, graced by the presence of our honorable Chief guest of the day, Dr.M S Ananth, Former Director of IIT- Madras, Dr.S.Salivahanan, Principal SSNCE, Ms.Kala Vijayakumar, President of SSN Institutions and other dignitaries. The inaugural began with offering gratitude to the almighty through a prayer song rendered by Vivek, Srisruthi and Keshav. The Techfest magazine, TechVibe was released by the dignitaries during this event. The Chief guest for the day was presented with a bouquet by Aathira Haridas, Student President of Department of Biomedical Engineering as a token of our gratitude. The gathering was addressed by Dr.S.Salivahanan who warmly welcomed M S Ananth. Vikrant, Student President of Department of Electrical and Electronics Engineering ,elucidated the crowd about the journey and breakthrough of Invente V1.0. Ms.Kala Vijayakumar explicated about the accomplishments of SSN institutions and expedition of Invente and soon after that she offered the Chief guest with a memento as a token of thankfulness. The Chief guest of the day, Dr.M S Ananth then got to inspire everyone with his words of wisdom about creativity and technological advancements in educational institutions from his vast experience. Vishveshwar, Student President of Department of Mechanical Engineering delivered the vote of thanks. The whole event was compered by Sanjana Smruthi and Keshav.

Overview

68 EVENTS

4 WORKSHOPS

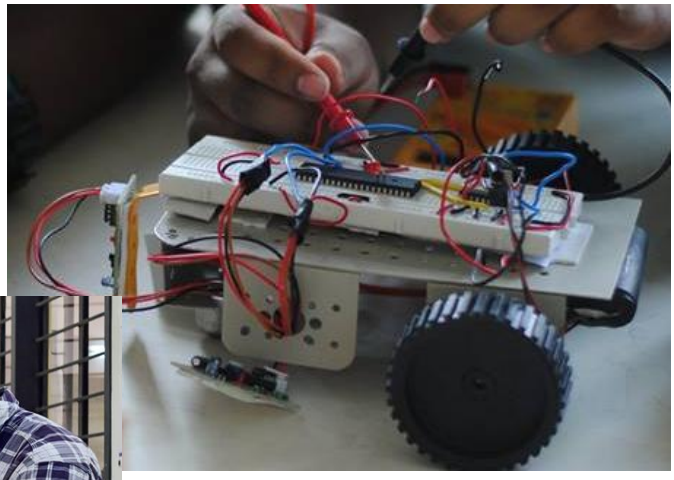
8L PRIZE MONEY

POWER UP

Various events from all the eight departments were amalgamated to form a set of roughly 75 events which were spread over the two days -9th and 10th of September 2016. Out of which 13 events were conducted by Electrical and Electronics Engineering Department under the banner of Power Up. Each of the 11 technical events , 2 non technical events and one workshop were conducted in an extraordinary and remarkable manner. The MATLAB workshop this year conducted by professionals from Educamp India captivated 750+ students who gained expertise on various facets of the software right from the basics.

20 Research papers which were shortlisted for the Paper Presentation were divided into 4 tracks : Power, VLSI, Recent trends, Machines and reviewed, out of which 3 papers were selected as winners by a dream panel on the first day. 12 teams with a penchant for scientific creativity witnessed a peer review and showcased their ideas in Project Display on the first day and the best projects were chosen as winners. It was in Eupraxia, Tech Quiz where 140+ teams were challenged on their vast technical knowledge and fast thinking. Complex and intricate maze containing varying levels of electrical disdain baffled the 200+ teams that participated in Electronic Maze and the race to the finish line to decide the winners was intense.

60 teams with a knack for coding and wiring an Arduino board were tested with challenging problem statements to find out the quickest and smartest way to solve it in Arduino Challenge on 10th Sept 2016. Circuitrix, conducted due to the combined efforts of Electronics and Communication Engg. and Electrical and Electronics Engg. showcased some brilliant ideas implemented on the circuit board from students across various disciplines. Armed with nothing but pliers and a deadline , 160 teams took on the adrenaline pumping job of defusing various bombs. The race against the clock was real in the event Bomb Squad on the second day. Like the army training, 23 teams had to make their robots fall in line, survive the track, complete the course and emerge unscathed at the end of it with time to spare in Line Follower on the second day of Invente. Hash Code organized by the combined efforts of CSE , IT & EEE departments confronted the kings and queens of this digital era , the Programmers in the ultimate coding showdown. In Bridge Balancio, 90+ teams enthusiastically demonstrated that just like you need to adjust your priorities to have a healthy work-life balance , you also need to have vary your resistances, inductances and capacitances to get a balanced circuit. Intrigued and curious minds of 170+ teams dared to play the rounds of How Stuff Works and emerged with insight into the intricacies of the electrical world. 350+ teams who were fascinated by the likes of Sherlock Holmes had the perfect platform to bring their little detective mind into action and solve the mystery in Sherlock Holmes during both the days of Invente. Finally the 350+ teams of cricket enthusiasts with the ability to recognize potential were asked to spend wisely and form an all-rounded team in IPL Bidding. All the winners were awarded with prize money and winning certificates. The participants were presented with participation certificates. Invente V1.0 saw over 20000 tech savvy engineers reinvent themselves under one roof making it a tremendous success. This astounding success has paved way for Invente to become a forerunner in upcoming technical fests.



PLACEMENTS 2K16

Campus placements is very close to the heart subject for students. " Getting Placed" is a thing of celebration for the students. Placement procedures generally commence in the start of a year, however the efforts, dedication and perseverance to get placed are being taken right from the start of the course in the previous year by the students. Though the 'Placement 'prima facie may look like a bed of roses in our institution, the fact is 'they are not'. It is observed that students have many misconceptions about placements and Institutions too to some extent give a different picture about placements and general public. Placements success is more dependent upon the student than the Institute, simply because placement opportunities come to a particular Institute not just on the basis of what that Institute has taught to its students, but on the basis of what the student can give to the company and whether that student has been taught what the company requires in terms of skill and capabilities.

Companies are grouped by three main categories based on the package..,**1.**Super Dream companies (package above 10L), **2.**Dream companies (package between 3-5.5L), **3.**Bulk companies (companies like CTS,TCS,WIPRO,ACCENTURE,INFOSYS)
About Few companies that have come so far..,

1.ZOOMRX:

- It's a Pharmaceutical Analytics company.
- Eligibility:6.5+ cgpa , no standing arrears, 1 or 2 arrear history is okay
- Package:5.6L per annum
- Four levels of round:**1.**Aptitude (includes Quans and Data Interpretation), **2.**GD, **3.**Technical Interview(Management based case studies), **4.**HR Round

2.MUSIGMA:

- It's Data Analytics company.
- Eligibility:6.5+ cgpa
- Package:21L for three years
- Four levels of round:**1.**Aptitude(includes Quans and behavioral round),**2.** Video synthesis (to infer from the video within 50 words),**3.**GD,**4.**Direct Interview

3.LATENTVIEW:

- It's an Analytics company.
- Eligibility:7+ cgpa, no standing arrears
- Package:4.5L ctc per annum
- Four levels of round:**1.**Aptitude(includes 40 questions with different weightages and negative marks for wrong answers),**2.**GD mostly on current affairs,**3.**Case Studies,**4.**HR Interview

4.FRESHDESK:

- It's Product Service company
- Eligibility: Anybody can sit
- Package:4.5-8L CTC per annum
- Four levels of round:**1.**Testing your ability in handling certain situations(two business situations and one normal life situation question), **2.**GD, **3.**Personality test(similar to aptitude), **4.**Two HR round

Pre-Placement Talk

A presentation about the company will be made during the pre-placement talk. Basically the presentation includes the information like selection procedure, company's milestones, organizational achievements, candidate scope of improvement within the organization if selected, salary, employment benefits. Usually this presentation will end up with question and answer session, students given chance to ask questions about .

Written Test

This is usually a simple aptitude test but depending on company, the difficulty level of the test may be at the higher side.

Group discussion

Qualified students will undergo this round. Most of the companies will have this round as a filtering round. This round may be or may not be conducted.

A common topic is placed before the group and a formal discussion or knowledge sharing is expected by the judge. Purpose of this round is to check communication skills, etiquette of person, listening ability, convincing power, group leadership, leader or follower and many more thing are evaluated on the basis of requirement or the particular intention of the company. It is very important to keep yourself updated with latest news(current affairs) and discussion topics for appearing in GD round.

Technical Interview

Based on outcome of above said process, students will further undergo a round called technical round. This round evaluates the technical ability of the student. In most of the cases this will be an individual round but it may be grouped with the formal interview.

Formal interview (HR Round)

Final round of the selection process, where the student's stability and his confidence level towards the particular work will be evaluated. The interview focuses on overall personality of the candidate. The more practical application knowledge a candidate has, the more chances of their selection increase. So having worked on projects in the industry, internships in relevant companies and industry visits to brands in the same sector will enhance a candidate's chance of selection.

Companies are looking for skilled people. The major objective of campus placement is to identify the talented and qualified professionals before they complete their education. This process reduces the time for an industry to pick the candidates according to their need. It is a cumbersome activity and hence majority of the companies find it difficult to trace the right talent. Many students do not understand the importance of placement training that is being imparted, whether it is an aptitude training or soft skills. They show the least interest in this due to various factors viz., projects, assignments or more of activities loaded by the colleges as part of their curriculum thinking that it is not useful. It is the responsibility of the students to get equipped on all aspects of career development along with creating a very good impact in them which makes them feel every minute they spend in the placement training session is worth being there and will help them in getting placed in their dream companies.

STUDENTS PLACED AS OF SEPTEMBER

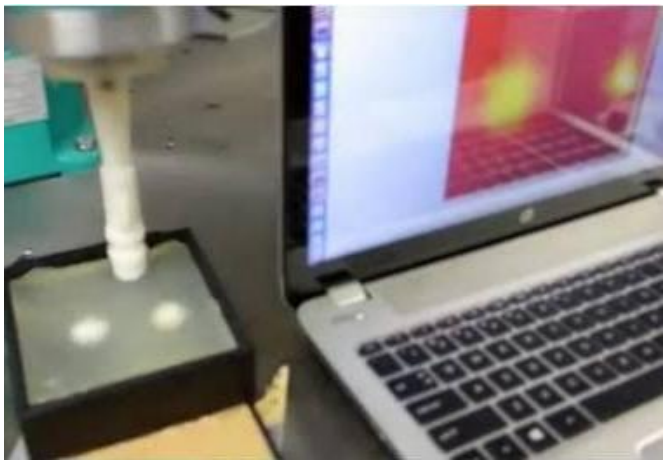
R GAYATHRI	ZOOMRX
BHARATH SIVASANKARAN R	ZOHO CORPORATION
ANTONY AMALRAJ MORALS	LATENTVIEW ANALYTICS PVT LTD
MANO VENKATESH R	FIDELITY INVESTMENTS
MUNDLA KUNDANA RAMYASREE	FIDELITY INVESTMENTS
G GOWRI SHANKAR	FRESHDESK
ROHIT RAO	ZOOMRX
SHREESHA R	MU SIGMA
SHREERAMAN A K	GOFRUGAL

MY SUMMER INTERNSHIP

By Yash Oza

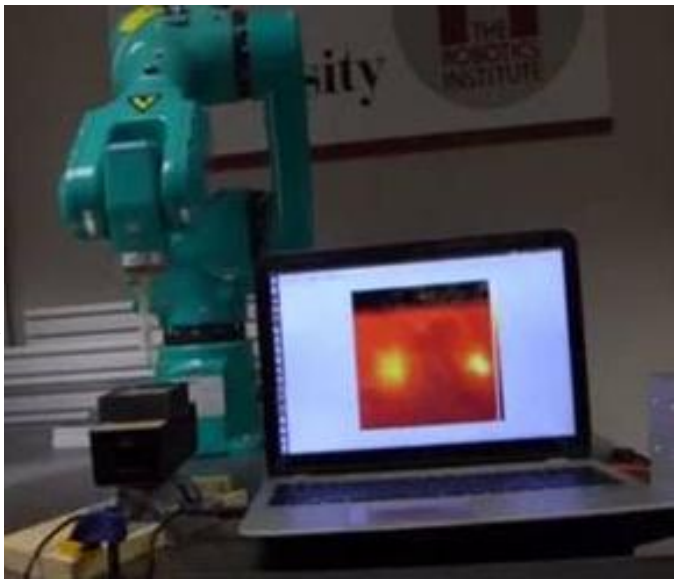
This summer, I got a chance to intern at the Robotics Institute of Carnegie Mellon University under Professor Howie Choset. I worked on a medical project, where our aim was to construct a 3D map of an infected organ inside the human body. The higher level aim was to achieve a completely automated robotic platform for tumor detection in the human body.

The project I worked on was titled "Stiffness Mapping Using Raster Scan on Foxbot". I used a Foxbot arm and a palpation tool platform that I developed for the project. The Foxbot arm was used as it provided very high precision movements, that helped us to efficiently test the algorithms that we had developed.



I initially got the Foxbot arm working by setting up the MATLAB-ROS communication interface. Hence, we were directly able to work on controlling the robot using MATLAB scripts. I then designed a new palpation tool for palpating the organ surface. We probed the organ at some random points, and used force feedback from the robot to get some initial idea about the location of the tumors. Using this data, we formed a probability map, showing us the approximate position of the tumors.

We then used Gaussian Process Regression algorithm to fit the data points collected during the random probing. We use this to do exploration and exploitation of the unexplored regions of the organ. I have attached some pictures that I took of the final results.

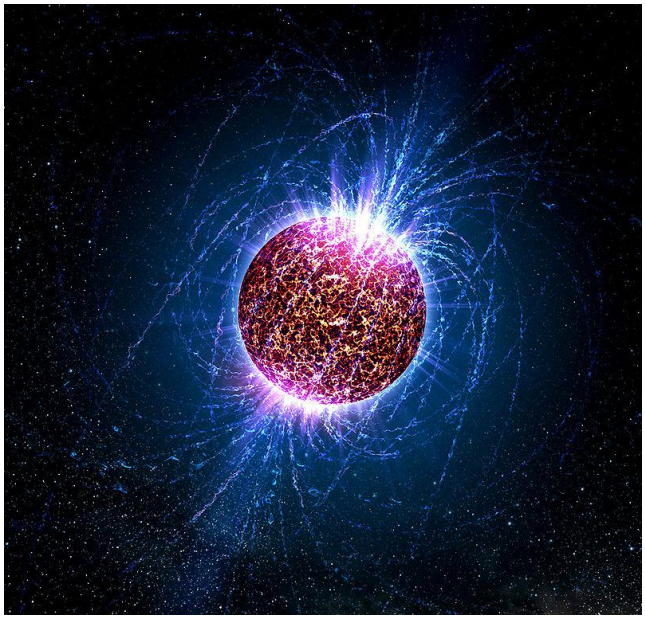


Overall, I had a great experience as I got to meet a lot of new people, and also interact with them about the things they are passionate about in the domain of Robotics. I also had very fruitful discussions with them about their problem solving approaches, which I am sure will help me in all of my future endeavors.

NEUTRON STARS

What are they?

A neutron star is about **20 km** in diameter and has the mass of about **1.4** times that of our **Sun**. This means that a neutron star is so **dense** that on Earth, one **teaspoonful** would **weigh** a **billion tons**! Because of its small size and high density, a neutron star possesses a surface gravitational field about **2 x 10^{11}** times that of Earth. Neutron stars can also have magnetic fields a million times stronger than the strongest magnetic fields produced on Earth.



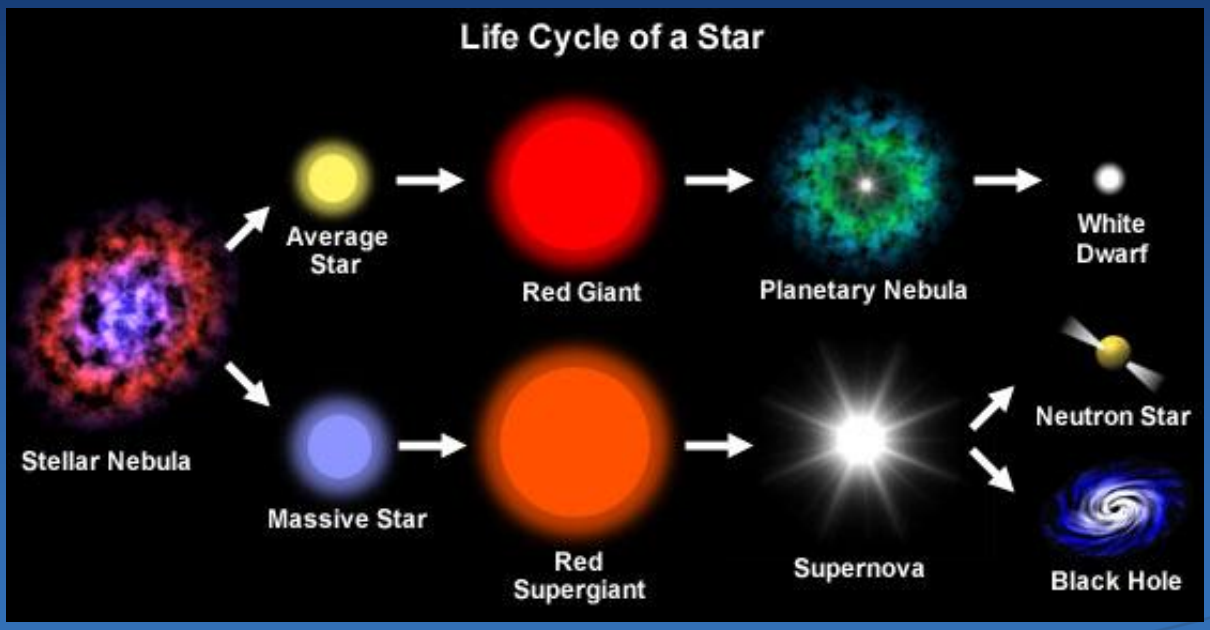
How are they formed?

These interesting objects are born from once-large stars that grew to four to eight times the size of our own sun before exploding in catastrophic supernovae. After such an explosion blows a star's outer layers into space, the core remains—but it no longer produces nuclear fusion. With no outward pressure from fusion to counterbalance gravity's inward pull, the star condenses and collapses in upon itself.

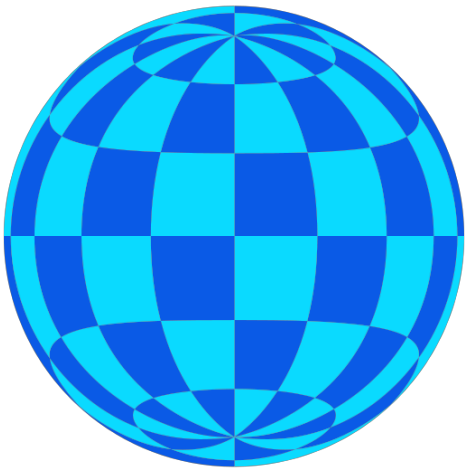
Gravitation

Neutron stars pack an extremely strong gravitational pull, much greater than Earth's. This gravitational strength is particularly impressive because of the stars' small size.

Life cycle of a star



Angular momentum



In physics, one of the key principles is that angular momentum is conserved. When a star collapses, explodes, all the momentum is transferred to the neutron star. Taking our **Sun** as example, the sun does one rotation in **25 days**. If its **radius** was to collapse from **700,000,000 km** to **12 km,** it would spin once every **0.000016 seconds** or **60,000 rotations per second**.

One interesting effect of such harsh gravitational fields is gravitational lensing. Specifically, because gravity can interact with photons, **it can bend light around it**. This also affects light leaving the surface of the neutron star. When you look at the **Moon** from your balcony, you can a best see **50%** of the **surface.** The bizarre effect is that if you were to look at a neutron star, you would be able to see **more than half** of it at any one time! Light leaving the star's surface on the side facing away from you would be bent, giving you a view something like this image shows.

BY ANIRUDH (3rd YR – SEC A)

CORONA DISCHARGE

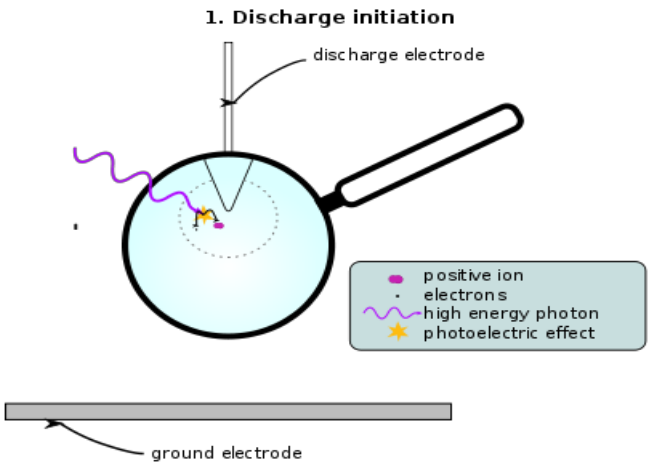
In electricity, a **corona discharge** is an electrical discharge brought on by the ionization of a fluid or gas surrounding a conductor that is electrically charged. Spontaneous corona discharges occur naturally in high-voltage systems unless care is taken to limit the electric field strength. The corona will occur when the strength (potential gradient) of the electric field around a conductor is high enough to form a conductive region, but not high enough to cause electrical breakdown or arcing to nearby objects. It is often seen as a bluish (or other color) glow in the air adjacent to pointed metal conductors carrying high voltages, and emits light by the same property as a gas discharge lamp.

The ionized gas of a corona is chemically active. In air, this generates gases such as ozone (O_3) and nitrogen oxide (NO), and in turn nitric oxide (NO_2), and thus nitric acid if water vapor is present. Ozone is intentionally created this way in an ozone generator, otherwise, these highly corrosive substances are objectionable or hazardous, and are undesirable where they waste power in electrical systems. Controlled corona discharges are used in a variety of filtration, printing, and other processes.

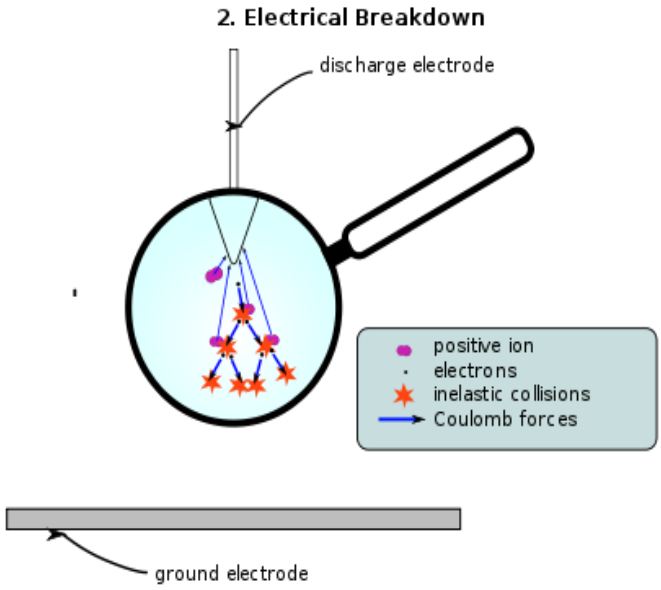
Mechanism of corona discharge

Corona discharge results when the electric field is strong enough to create a chain reaction: electrons in the air collide with atoms hard enough to ionize them, creating more electrons which ionize more atoms. The process is:

A neutral atom or molecule, in a region of strong electric field (such as the high potential gradient near the curved electrode) is ionized by a natural environmental event (for example, being struck by an ultraviolet photon or cosmic ray particle), to create a positive ion and a free electron.

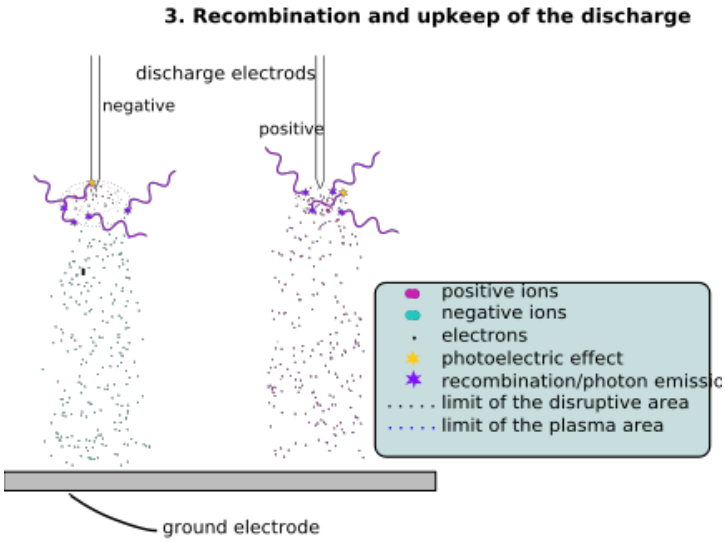


2.The electric field accelerates these oppositely charged particles in opposite directions, separating them, preventing their recombination, and imparting kinetic energy to each of them.



3. The electron has a much higher charge/mass ratio and so is accelerated to a higher velocity than the positive ion. It gains enough energy from the field that when it strikes another atom it ionizes it, knocking out another electron, and creating another positive ion. These electrons are accelerated and collide with other atoms, creating further electron/positive-ion pairs, and these electrons collide with more atoms, in a chain reaction process called an *electron avalanche*. Both positive and negative coronas rely on electron avalanches. In a positive corona all the electrons are attracted inward toward the nearby positive electrode and the ions are repelled outwards. In a negative corona the ions are attracted inward and the electrons are repelled outwards.

4. The glow of the corona is caused by electrons recombining with positive ions to form neutral atoms. When the electron falls back to its original energy level, it releases a photon of light. The photons serve to ionize other atoms, maintaining the creation of electron avalanches.



5. At a certain distance from the electrode, the electric field becomes low enough that it no longer imparts enough energy to the electrons to ionize atoms when they collide. This is the outer edge of the corona. Outside this the ions move through the air without creating new ions. The outward moving ions are attracted to the opposite electrode and eventually reach it and combine with electrons from the electrode to become neutral atoms again, completing the circuit.

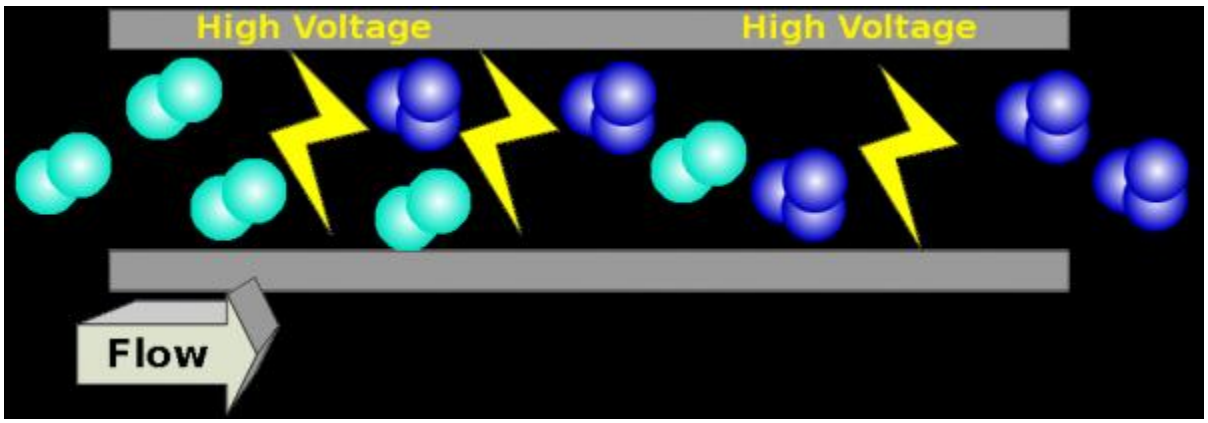
Thermodynamically, a corona is a very *nonequilibrium* process, creating a non-thermal plasma. The avalanche mechanism does not release enough energy to heat the gas in the corona region generally and ionize it, as occurs in an electric arc or spark. Only a small number of gas molecules take part in the electron avalanches and are ionized, having energies close to the ionization energy of 1 - 3 ev, the rest of the surrounding gas is close to ambient temperature.

The onset voltage of corona or corona inception voltage (CIV) can be found with *Peek's law* (1929), formulated from empirical observations. Later papers derived more accurate formulas.

OZONE GENERATION FROM CORONO DISCHARGE

The fundamentals are simple. A spark (corona discharge) is used to split the diatomic oxygen molecule into valant oxygen atoms. These oxygen atoms have a negative charge and will bond quickly with another oxygen molecule to produce ozone! For each split oxygen molecule 2 ozone molecules are produced.

A power supply is used to produce an electrical discharge across a dielectric, and an air gap. The dielectric is used to diffuse the discharge across a large area as opposed to single point like a normal spark. The oxygen molecules passing through the air gap are exposed to the electrical discharge and are split into ozone (at least that is the hope). A great deal of heat is generated from this process and is removed from the electrodes as shown.



BY ANIRUDH (3rd Yr- Sec A)

HOW STUFFS WORK??

Ever wondered how chargers work and how they have evolved over the years?

Here's the answer,

Laptops:

While laptops have gotten thinner and smaller, the laptop charger has remained heavy and fat, canceling out much of the point of having a small and powerful laptop. This, of course, wouldn't be an issue if laptops were able to hold a charge for a considerable period of time, but few, if any, can really get you through the day, or even through half a day.

The problem is that laptops need a lot of power to charge and that requires some sort of AC/DC conversion, which in turn requires a big power brick to accompany every laptop. It has taken years, but a few scientists from MIT have finally figured out how to compress all that charging hardware into a neat, portable package.

Enter the Dart, a universal laptop charger that is four times smaller and lighter than your current brick. The makers of the Dart told *Fortune* they have teamed up with a company to sell the brick with new laptops but wouldn't say who it was at this point. *More power, less worry*

Mobile chargers:

Recent trend goes in accepting wireless chargers as the trendy solution but the major de-merit encountered by them is Mobility. The mobile device must be kept on the pad for charging. It cannot be moved around as it is with direct contact charger with wire. It also cannot be operated while charging. Though the signal transmitted between your smartphone and the charging station is wireless, it is still necessary to plug the charging station to the wall. Therefore, devices currently available on the market are not portable, and therefore do not allow you to charge 'on-the-go.

ADVANCED TECHNICAL SOLUTION:

Smartphone makers have tried to cram as much battery into their devices but they have always put form (thinness) above function (battery life). A few years ago, case makers like Mophie decided to combine a protective case with an extra battery, giving rise to the battery case. But the battery case didn't protect smartphones from the most lethal danger to any electronic device: water. Power users had to make a choice between protection or juice.
The folks at Life proof solved the waterproof problem a while ago with its line of Fre cases. And now they have tackled both problems with its new Waterproof battery pack for the iPhone 6. The 3D-printed mockup of the case that Fortune checked out in Vegas wasn't too bulky or heavy. The Fre Power isn't available just yet, but the company says it should be out sometime in 2015.

By Ramyaa EEEB 2nd Year

DO IT YOURSELF!

How to make a mini hand drill?

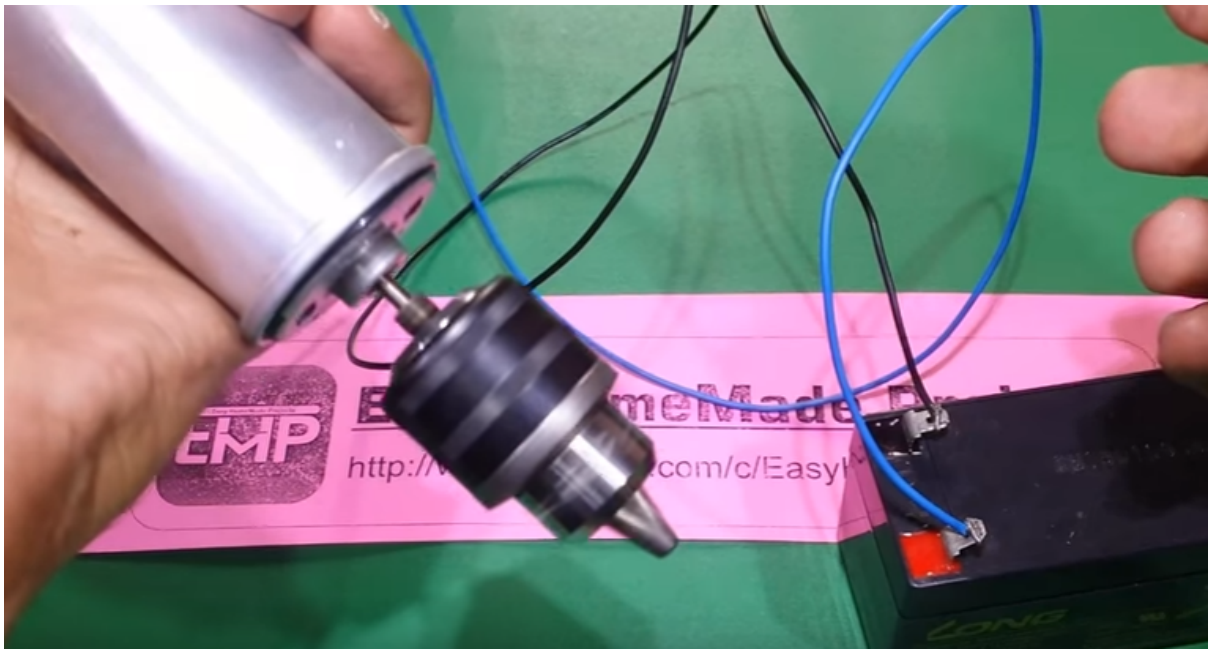
Requirements

1. 12V DC motor
2. 0.6 to 6mm drill chuck

Procedure

1. Attach the drill chuck to the DC motor using bolts of suitable size.

2. Place the arrangement in a cylindrical enclosure.
3. Make provisions for a switch and wiring of motor.
4. Use 12V, 1.2 Ah battery for better performance of the drill.



Courtesy: Easy Homemade Projects

Video Tutorial: https://www.youtube.com/watch?v=qLEqHvwwQ7s

Drill chuck: http://www.banggood.com/0_3-4mm-Drill-Chuck-with-Wrench-and-3_1mm-Bushing-Connecting-Shaft-p-1043551.html

By Shabbeer Basha , EEEB 3rd Year

Alumni Talk

A year ago, I would never have pictured my life the way it is now. PLACEMENT, GRE, CAT , GATE , JOBS seemed to be the highlighted text in our dictionaries with the dawn of our final year of engineering. Being encapsulated in a maze of options leading to different destinations was overwhelming. The idea that once we were through this enigma, we would move a step towards our goals enveloped our minds.

I chose to work initially before pursuing my masters so as to gain a better understanding of the work in the industry ("or what they call the corporates"). The transition from campus to corporate is not hard but neither is it easy. There are certain things you no longer have access to

(" one major thing being no vacations") , but at the same time there are other benefits as well - you start becoming independent, become good at multitasking etc.

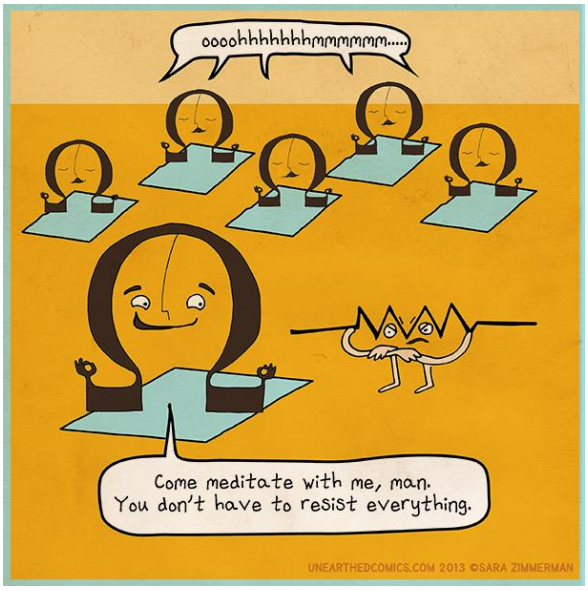
Before sitting for a placement in a particular company , there are a few important points to consider .

Research well about the kind of work the company has been working on. See if it is in line with your school of thoughts and goals. Never join a company just because of its lucrative pay packages if you are not satisfied with the job description, because finally job satisfaction is the one that will make you happy. Also ensure that you question your interviewers (not the HR person) more in detail about your job, the kind of work you will be involved in and your training. At times, the job description mentioned will not be what you work on as soon as you join the company.

Each one will have their own share of failures and success'. A smooth sea will never make a skillful sailor. So never be disheartened by failures as we all know " Failures are the stepping stones to success".

By N.Sermisha

Researcher, TCS Innovation labs



This on a lighter note.

EDITORIAL TEAM