VOLUME 6 ISSUE 2

REDEEM

Quarterly Newsletter

Electrical & Electronics Engineering Department

SSN College of Engineering

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INVENTE Report

Article by Prajay Raghu

FROM HOD'S DESK

I am delighted to highlight the significant achievements of the department during the past three months.

Students of our department arranged 10 events (8 technical & 2 Non technical) under the name 'POWER UP' during Invente 2.0. All the events ignited curiosity and encouraged them to try something new.

Mr. Naren Raju Nagarajan of IV Year has successfully completed his collaborative work entitled "Mapping AGN Extended Emission line regions with Broadband Optical Images" at Academia Sincia, Institute of Astronomy and Astrophysics, Taiwan.

On research front, Dr.M.Balaji presented the progress of his ongoing DST project titled "Design and Development of Hybrid Switched Reluctance Motor Drive" to the expert committee of DST.

108 UG students and 11 PG students participated enthusiastically in the presentation for Student Internally funded Scheme.

Dr. N. B. Muthuselvan, Dr. M. Devash Raj, Dr. K. Usha, Dr. R. Deepalaxmi and Dr. S. Tamilselvi have organized various Workshops.

Dr. V. Rajini's project titled," A low cost Minimal footprint single phase solid state transformer for low/ medium voltage applications" has been approved by AICTE for Funding under RPS scheme.

AICTE has sponsored to conduct two week National Level Faculty Development Programme on "Power Converters, Control and Grid Integration of Renewable Energy Sources" for the proposal submitted by Dr. V. Kamaraj, Dr. R. Seyezhai, Dr. R. Ramaprabha and Dr. M. Balaji.

I congratulate and appreciate the efforts of Students and Faculty who have contributed to the continuous improvement of the department.

CONTENTS

PREFACE

Behaviour economics plays a key role in marketing. This year Nobel Prize in economics is given to this category. The movie makers create headlines before release to get attention. Companies capitalize on the biology of dopamine versus serotonin to get us addicted to their products. Social media generate dopamine, associated with pleasure, and hence can drive addiction. The main problem is that when dopamine goes up, serotonin goes down, causing unhappiness. It's important to realize that the dopamine (or reward-generating) pathway is the same no matter what your source of pleasure is. It can be a substance, such as nicotine, alcohol, junk food; or it can be habit, behavior, such as internet surfing, shopping (amazon,flipcart,etc), etc The problem, in a nutshell, is that dopamine is an excitatory neurotransmitter, and in excess is neurotoxic. When dopamine is released, and the neuron on the other side accepts the signal, it can damage that neuron. Over time, excitatory neurotransmitters can cause cell death. To protect itself from damage, the postsynaptic neuron employs a self-protective mechanism — it down regulates its receptors. By having fewer receptors, the dopamine cannot do as much damage. So, each time you get a "hit" or rush of dopamine, the number of receptors decreases. As a result, you need increasingly larger doses or "hits" to get the same rush. Eventually, you end up with tolerance, a state where even a large dose produces no effect. Once the neurons start to actually die off, you're a full-blown addict. The point is that it takes three weeks for the receptors to repopulate. The cravings can go on for upwards of a year when you're addicted. This is a long-term process that sometimes requires medical intervention and medical management by physicians, who understand addiction medicine.

Serotonin, on the other hand, is not an excitatory neurotransmitter. When it acts on the serotonin receptor (the "contentment" receptor), no damage occurs. Hence, happiness does not lead to addictive behavior. Keep in mind that dopamine down regulates serotonin, so it's basically impossible to achieve happiness (related to serotonin) through pleasure-seeking behavior (related to dopamine).The cheapest pleasure stimulates dopamine. Many reach for alcohol when they feel down, thinking it'll help them feel better, but neurochemical science reveals this simply cannot happen. seeing throughout all of civilized society. It rather adds the stress hormone cortisol to the mix, which down regulates the serotonin receptor, and you have a recipe for both addiction and depression. That's what we're seeing throughout all of civilized society. Raising our serotonin level increases feelings of happiness. There are three ways to increase serotonin, and all are free: making human connections, contributing to a larger cause and coping with stress. The act of contributing to something greater than yourself; making a contribution to society, raise the serotonin level. To turn the trends of addiction around, we have to understand the difference. Pleasure is visceral; happiness is ethereal. Pleasure is short-term; happiness is long-term. Pleasure is usually achieved alone; happiness is usually achieved in social groupings. Pleasure is taking; happiness is giving. Pleasure can be achieved with substances; happiness cannot be achieved with substances. The extremes of pleasure all lead to addiction.

The natural state of man is idleness and so passionate work is essential to happiness. One is lucky if one has the chance to work at something that one enjoys and also what one is good at. Ever since childhood we are told to work hard, get good marks in school and get into a good college. At the university, we are pushed to take 'useful subjects' rather explore the unknown. We finally land a reasonable job, marry a suitable partner, live in a nice house and get a nice car. And we repeat the same process with our young. Then one day in our forties, we wake up in the morning and ask ourselves, 'Is this what life was all about?' We seem to have stumbled through life, intent on the next promotion, while life has passed us by. An unfulfilled life is a tragic loss. No one bothered to teach us the difference between 'making a living' and 'making a life.' No one encouraged us to find a passion. We were not exposed to choices in different fields. We did not read the great books of the humanities which portray struggles of men to create meaning in their lives. Very few are lucky find a passion in early ages. The way to tell you have found passionate work is when it doesn't feel like 'work'. Time gets distorted and suddenly it's evening and you forgot to eat lunch. You were in the 'zone' as the athletes call it. When we are absorbed in passionate work, we find that our ego tends to disappear. Passionate, self-forgetting work is of high quality. Making a life, not just living, is the secret of happiness.

Life isn't about finding yourself, it is about creating yourself' George Bernard Shaw

HONOURS

Dr. R. Ramaprabha (Assoc. Prof./EEE) has been appointed as Technical Review Committee Member on 15th July 2017 for an IEEE `International Conference on Power, Energy control and Transmission Systems' which will be held during Feb 22-23, 2018 at Sri Sai Ram Engineering College, Chennai.

Dr.R.Seyezhai, ASSP/EEE received the IEAE Research Excellence award for the year 2017 awarded by Institute for Exploring Advances in Engineering, Karnataka on 02.08.2017.

Dr.R.Seyezhai, ASSP/EEE has been nominated as technical committee member for the international conference on Power & Energy Systems towards Sustainable Energy, PESTSE – 2018 to be held at Amirta University, Bangalore during Jan. 18-20, 2018.

Dr.R.Seyezhai, ASSP/EEE has been nominated as the associate editorial board member for the International Journal of Scientific Research in Engineering (IJSRE) on 12.08.2017.

K.Murugesan ASSP/EEE inaugurated the Association of EEE (E SMART) and delivered the inaugural address in Vivekanandha College of Technology for Women, Tiruchengode, Namakkal District on 18-08-2017.

Dr.V.Rajini & Ms.AlaguDheeraj, presented the details of their invention before the internal steering committee for patents. The invention is approved for patenting. The complete specification details has been sent to external agency for filing on 30.08.2017.

Dr. R. Ramaprabha, Asso.Prof./EEE acted as one of the Project Display Judges in INVENTE 2.0, 2017 at EEE department on 08.09.2017 & In-charge for the event.

Dr.V.Rajini has been invited to conduct a tutorial at the international conference on renewable energy and its research applications 2017 ICRERA17 to be conducted at California, USA during 5-8 November 2017.

PAPER PUBLICATIONS

Dr.S.TamilSelvi, ASSP/EEE, has published "HCC based Interleaved Boost Converter with Optimal Switching Frequency Control of Wind Energy Conversion System for DC Microgrid Application" online in IET, The Journal of Engineering, an open access article,doi: 10.1049/joe.2017.0241 on 28.06.2017.

Thiyagarajan V., AP/EEE, published a paper titled, "Design and Simulation of Modified Symmetric and Asymmetric Multilevel Inverter" in "Research Journal of Pharmaceutical, Biological and Chemical Sciences", ISSN: 0975-8585, 8(3S), 2017, PP 283-290. (Anna University Annexure 2, Scopus Indexed) on 03.07.2017.

M. Venmathi (FT Research Scholar/EEE) and Dr. R. Ramaprabha (ASSP. /EEE), published a paper on 5th July 2017, titled "Impact of modified perturb and observe control on MPPT of PV/battery fed three - port DC-DC converter", ActaScientiarum Technology Journal, Vol. 39, No. 3, pp. 313-323, July-Sept., 2017ISSN1806-2563(Print)eISSN18078664(online)ScopusIndex0.527(DOI:http://dx.doi.org/10.4025/ actascitechnol.v39i3.29502)Listed Thomson Reuters on 05.07.2017.

R. Supriya, V. Aishwhariya (UG Students) and Dr. R. Ramaprabha (ASSP/EEE), published a paper titled "Development of an Economic Photovoltaic Array Simulator using an Off-The-Shelf Power Supply", Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS), RJPBCS 8(3S), pp. 317-324, May – June 2017(Suppl.), ISSN: 0975-8585 Scopus Index 0.35 on 10.07.2017.

Dr.R. Seyezhai and K. Premkumar (AP/RIT College) published a paper titled, "Comparative Evaluation of Pulse Width Modulation Strategies For Hybrid Multilevel Inverter for Application in Photovoltaic Power Extraction", World Applied Sciences Journal 35 (5): 692-702, 2017, ISSN 1818-4952, © IDOSI Publications, 2017,DOI: 10.5829/idosi.wasj.2017.692.702 on 15.07.2017.

Dr.R.Seyezhai, ASSP/EEE and Pridhvi Prasanth (passed out UG student) published a paper titled, "Performance Analysis of Four Phase Interleaved Boost Converter for Photovoltaic Applications" Journal of Renewable energy and Resources Volume 2 Issue 2, 2017 Mantech Publications on 20.07.2017.

Dr.U.Shajith Ali, Associate Professor published a paper titled "Performance Enhancement of Modular Multilevel Inverter Using Trapezoidal PWM Control" in International Journal of Control Theory and Applications, Vol.10, No.37, pp. 265-271 on 24.07.2017.

Subhitcha.R ,V.Sowmya (IV Yr.EEE, B) &Dr.R.Seyezhai, ASSP/EEE published a paper titled, "Performance Analysis of PWM based Voltage Source Inverter", International Journal of Advanced Research in Basic Engineering Sciences and Technology (IJARBEST) Vol.3 Issue.7 July 2017,pp.1-12 on 25.07.2017.

E. Narmadha, M. Sudhakaran (research scholar), K. Vijayakumar, (PG Students, GanadipathyTulsi's Jain Engineering College) & Dr. R. Seyezhai published a paper titled, "Wireless Based Four Quadrant Operation of Three Phase BLDC Motor with Fuzzy Logic Using FPGA Controller", International Scientific Global Journal in Engineering, Science and Applied Research (ISGJESAR), Vol. 2, No. 3, June, 2017 | ISSN: 2456-1894 on 28.07.2017.

Thiyagarajan V., AP/EEE, published a paper titled, "Analysis of Multicarrier PWM techniques for Photovoltaic fed Cascaded H-Bridge Multilevel Inverter" in "Journal of Electrical and Electronics Engineering (JEEE)", P-ISSN: 1844-6035, Vol.10, No. 1 (2017), PP 85-90. (Anna University Annexure 2, Scopus Indexed) on 08.08.2017.

Dr.R.Seyezhai, ASSP/EEE and M.Sudhakaran (part-time research scholar) published a paper titled, "A Simplified Direct Torque Control-Space Vector Modulation Based Induction Motor Drive for Trinary Hybrid Cascaded H-Bridge Multilevel Inverter", Journal of Computational and Theoretical Nanoscience, Vol. 14, 1190–1198, 2017, pp.1190-1198. (AU, Annx. -1) on 22.08.2017.

Dr.R.Seyezhai, ASSP/EEE and Chitra Vallavan (part-time research scholar) published a paper titled, "Study and Analysis of Switched Mode DC – DC Converter Topologies for Telecommunication System", International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS) Volume VI, Issue VI, June 2017 | ISSN 2278-2540. (UGC Approved journal) on 22.08.2017.

S.T. Namitha Shamili (passed out PG Student) and Dr. R. Seyezhai, ASSP/EEE published a paper titled, " A Review of Multi-Input DC-DC Converter Topologies for DC Micro Gridtional Grid, Journal of Control Theory and Applications, ISSN : 0974-5572 International Science Press,Volume 10 • Number 29 • 2017.(Scopus Indexed) on 30.08.2017.

R.Mahalakshmi (passed out PG Student) and Dr. R. Seyezhai, ASSP/EEE published a paper titled, " Design and Simulation of an Integrated PFC AC-DC Converter for Telecoms,International Journal of Control Theory and Applications, ISSN : 0974-5572 International Science Press,Volume 10 • Number 29 • 2017.(Scopus Indexed) on 30.08.2017.

Thiyagarajan V., AP/EEE, published a paper titled, "New Asymmetric Seven Level Inverter with Minimum Number of Voltage Sources and Switches" in "Journal of Electrical Engineering (JEEE)", ISSN: 1582-4594, Vol.17, No. 3 (2017), PP 354-359. (Anna University Annexure 1, Scopus Indexed) on 05.09.2017.

J. Raji and V. Kamaraj Prof/ EEE, published a paper titled "Analysis of Stability and Dynamic Behaviour of Ultra Lift Luo Converter", Journal of Electrical Engineering & Technology, Vol 12 No5, September 2017 on 10.09.2017.

A.Sykarus,V.Rajini, M G Danikas, R.Sarathi," published a paper titled, "A Study of SiR/EPDM Mixtures for Outdoor Insulators", International journal of Engineering, Technology & Applied Science Research Vol. 7, No. 4, 2017, 1737-1740 1737-1740, Thomson reuters indexed.This is the collaborative initiative with IIT Madras and Democritus University, Greece.The novel polymeric samples were prepared and investigated at SSNCE and sent to Greece for flash over measurements and IITM was involved in this work on knowledge sharing basis on 13.09.2017.

S.Krishnaveni, R. Subhashini, V.Rajini, published a paper titled ," Inactivation of bacteria suspended in water by using high frequency unipolar pulse voltage", journal of food pro cess engg, Wiley Publications, 2017;00: e12574. https://doi.org/10.1111/jfpe.12574, ISSN: 1745-4530(annexure I) on 13.09.2017.

G. Ramya (FT Research Scholar/EEE), M. Mohana Krishnan (PG Student/EEE) and R. Ramaprabha (Asso.Prof./EEE) published a paper titled, " Comparative Study on Control Methods for PMSM Based Wind Energy Using PI and Fractional Order Controller", International Journal of Control Theory and Applications (International Science Press) Vol. 10, No.29, pp. 253-263, 2017 ISSN: 0974-5572 Scopus Index 0.2 on 14.09.2017.

M. Venmathi (FT Research Scholar/EEE) and R. Ramaprabha (Asso.Prof./EEE), published a paper titled "Investigation on Isolated Derived Topology For Differential Power Processing in Photovoltaic System", International Journal of Control Theory and Applications (International Science Press) Vol. 10, No.29, pp. 265-272, 2017 ISSN: 0974-5572 Scopus Index 0.2 on 14.09.2017.

S. Malathy (Asso.Prof./EEE), R. Ramaprabha (Asso.Prof./EEE), B. Kabilram, K. Manirajan, K. Marriappan and G. Vignesh (UG Students),published a paper titled " Performance Analysis of Reduced Device Count Multilevel Inverter with Low Frequency PWM Schemes", International Journal of Control Theory and Applications (International Science Press) Vol. 10, No.29, pp. 345-354, 2017 ISSN: 0974-5572 Scopus Index 0.2 on 14.09.2017.

Ramya (Full Time Research Scholar), Dr.M. Balaji (ASSP/EEE) published a paper titled " A new approach for minimizing torque ripple in a BLDC motor drive with a front end IDO dc-dc converter" in Turkish Journal of Electrical Engineering & Computer Sciences,Vol.25,pp.2910-2921,2017. (Thomson Reuters indexed), (Impact factor – 0.578) on 20.09.2017.

S. Gowtham(Part Time Research Scholar), M.Balaji(ASSP/EEE), S. Harish, M.S. Abraham Pinto, G. Jagadeesh published a paper titled "Fault Tolerant Single Switch PWM DC-DC Converters for Battery charging Applications" in Energy Procedia,Vol. 117,pp. 753–760, 2017 on 23.09.2017.

PROJECT PROPOSALS

Dr.R.Deepalaxmi (ASSP/EEE), Dr.V.Rajini (Prof/EEE) submitted a project proposal on 12.07. 2017,titled " Identification of Cable Insulation Material for Nuclear Power Plants" for Rs. 8.00 lakhs under faculty research project proposal funding scheme in SSNCE.

Dr.Devesh Raj ASSP/EEE submitted a research project proposal on 26.07.2017, for external funding as Co-Principal Investigator (Co-PI) to DST-SERB under Extra Mural Research Funding (Individual Centric) scheme.

Dr.R.Seyezhai, ASSP/EEE and Ms.D.Umarani submitted a project proposal to Central Power Research Institute, CPRI, Bangalore under RSOP scheme for Rs.20 Lakhs on 27.07.2017.

Dr.R.Seyezhai, ASSP/EEE and Ms.D.Umarani submitted a project proposal to DST-SERB, Extramural research scheme , for Rs.14 Lakhs on 28.07.2017.

Dr.K.Usha, (Asso.Prof/EEE) submitted a project proposal forRs. 25.15 lakhs under Early Career Research (ECR) funding scheme in DST-SERB on 08.08.2017.

Dr.K.Usha ASSP/EEE presented the project submitted for the internal staff project funding at SSNCE on 16.08.2017.

The following student projects have been submitted for internal funding under the guidance of Dr.M.Balaji on 05.09.2017.1. R. Jyothiraditya (III Year),Tharun Kumar (III Year),Rishi Anand (III Year),N. Vignesh (III Year)," Design and control of spoke type BLDC motor for an electric bicycle" 2. V. Vignesh (III Year)," Smart bin - An automatic waste segregating and managing bot" 3. I. Keerthana (II Year(M.E))," Fault tolerant control for hall sensor failures in BLDC motor"

Dr V Rajini's project titled," A low cost Minimal footprint single phase solid state transformer for low/ medium voltage applications" has been approved by AICTE for Funding under RPS scheme 2017-18. funding Amount: Rs. 19,82,353. Duration : 3 years.

Dr.M.Balaji presented the progress of ongoing DST project titled "Design and Development of Hybrid Switched Reluctance Motor Drive" to the expert committee at BVRIT Hyderabad college of Eng. For Women, Hyderabad on 23.09.2017.

MEETINGS

Dr.R.Seyezhai, ASSP/EEE attended the meeting at SSN Innovation centre on 7.07.2017, regarding the status of projects carried out in the centre.

Dr.R.Ramaprabha ASSP/EEE attended DC meeting at Dr. M. G. R. Educational and Research Institute University, Chennai on 03.03.2017 as DC member on 15.09.2017.

PHD

Dr.R.Seyezhai, ASSP/EEE conducted the synopsis meeting for the research scholar Mr.M.Sudhakaran at SSNCE on 6.07.2017.

Dr.R.Seyezhai, ASSP/EEE conducted the fourth DC meeting for the research scholar Mr.Bharathi Sankar on 13.07.2017,after receiving the reports from the examiners.

Dr.R.Seyezhai, ASSP/EEE conducted the confirmation meeting for the research scholar Ms.D.Umarani on 13.07.2017 at SSNCE.

Dr.R.Seyezhai, ASSP/EEE conducted the synopsis meeting for the research scholar Mr.T.Tamizhselvan on 15.07.2017 at SSNCE.

Ms.Margaret Amutha,full time research scholar of Dr.V.Rajini Prof/EEE, submitted her thesis to Anna university on 21.07.2017.

G. Ramya, Full-time PhD student of Dr. R. Ramaprabha (ASSP /EEE) has submitted her thesis on 28.07.2017.

DR.R.Seyezhai, ASSP/EEE & A.BharathiSankar (Full-time research scholar) published a patent titled, "Solar powered battery operated vehicle using BLDC Drive" on 02.08.2017.

Ms.M.Tamilarasi (Full- time research scholar) under the guidance of Dr.R.Seyezhai submitted her Ph.D. Thesis after the scrutiny report to Anna University, Chennai on 08.08.2017.

DR.R.Seyezhai , ASSP/EEE conducted the Viva-voce examination for the full-time research scholar Mr.A.BharathiSankar and he defended his thesis on 16.08.2017.

GUEST LECTURE

Dr.V.Kamaraj (Prof. & head), Dr. R. Ramaprabha and Dr. M. Balaji (Faculty coordinators) arranged a guest lecture under approved AICTE-INAE Distinguished Professorship Scheme. Prof. S. Madivaanan, Scientist 'G', Additional Director (Ret), CVRDE/DRDO, Avadi, Chennai – 54 delivered a lecture on " Role of Solid State Drives in Defence Applications" to M.E. Power Electronics & Drives students on 21.07.2017.

K.Murugesan ASSP/EEE Delivered a guest lecture on Power Quality Improvement in Vivekanandha College of Technology for Women, Tiruchengode, Namakkal District, on 18-08-2017.

DR.R.Seyezhai, ASSP/EEE delivered a guest lecture on DC-DC Converters at Velammal Institute of Technology, Chennai.

OTHER ACTIVITIES

Dr.V.Rajini, Prof/EEE, acted as panel member for UG admissions on 03.07.2017 and 04.09.2017.

Dr.R.Seyezhai, ASSP/EEE attended the one day workshop on Intellectual Property Rights (IPR) on 25.07.2017, conducted by Assocham at SSNCE.

AICTE-FDP on "Power Converters, Control and Grid Integration of Renewable Energy Sources", applied by Dr. V. Kamaraj, Dr. R. Seyezhai, Dr. R. Ramaprabha and Dr. M. Balaji for 3,55,000 has been approved on 07.07.2017 (Ref No.:6-56/RIFD/FDP/Policy-1/2016-17)& Order received in August 2017.

Thiyagarajan V., AP/EEE, participated in the workshop titled, "Research Challenges and Innovation on Solar Energy Systems" organised by the department of EEE, SSN College of Engineering, Kalavakkam.

Dr.R.Seyezhai, ASSP/EEE, Mr.Amith Tyagi, Asst.Marketing Manager submitted the proposal for setting up the Atal incubation Centre at SSN under the guidance of the Principal, SSNCE and Chief Mentor, SSN Innovation & Incubation Centre on 30.07.2017.

Dr.R.Ramaprabha ASSP/EEE handled a session on "Special Lab Visit – Solar Energy Research Lab" in First Year M.E. Power Electronics & Drives (EEE department) orientation programme on 31.08.2017

Dr.R.Ramaprabha, Asso.Prof./EEE reviewed paper for IEEE Transactions on Smart Grid, Sep 2017 on 10.09.2017.

Dr.R.Ramaprabha, ASSP/EEE reviewed paper for International Journal of Power Electronics, Inderscience Publishers, Sep 2017 on 25.09.2017.

WORKSHOP CONDUCTED

RESEARCH CHALLENGES AND INNOVATION ON SOLAR ENERGY SYSTEMS

The Department of EEE, SSN College of Engineering organized a one day workshop titled "Research Challenges and Innovation on Solar Energy Systems" on 4th August 2017.

Coordinators: Dr.S.Tamil Selvi , Dr.K.Usha , Dr.R.Deepalaxmi

Number of students: 105

Resource Person: Dr.V.Karthikeyan, Associate Professor/EEE, KPR Institute of Engineering and Technology, Coimbatore.

Details of the Workshop:

This workshop mainly focused on imparting the role of advanced power converters, and future concepts in renewable energy systems related to reliability and technology advancement. This workshop was intended to enlighten the importance and, research challenges in energy storage systems through practical knowledge and understanding into the younger minds. The invited expert member further demonstrated the real time integration of energy storage system to high power solar PV applications, with hands on training using PSCAD simulation software. Overall the workshop was conducted for the notions pondering: (a) To realize of importance of the research and development in the renewable energy system; (b) To create the suitable research platform to solve the issues related to renewable energy systems and (c) To understand the roll of individuals to contribute towards the development of the research.The Event saw a huge number of interesting participants including UG/PG students and research scholars of 105. Out of which 29 participants were from outstation, 39 participants were from various other institutions in Chennai and the remaining participants belong to second year and third year of own department and college.

Sessions in the Workshop:

Session I - Lecture on Research Challenges and Innovation on Solar Energy Systems

Session II - Hands on training (Simulation of Power Converters for Solar PV System) at UG

Simulation Lab


SSN
SSN College Of Engineering
Department of Electrical and Electronics Engineering
ONE DAY WORKSHOP
on
"Research Challenges and Innovation on Solar Energy System"
4th August, 2017


SSN

TWO DAYS NATIONAL WORKSHOP ON APPLICATION OF PLC & SCADA FOR INDUSTRIAL AUTOMATION

Department of EEE Organized Two days Workshop On "Application of PLC & SCADA for Industrial Automation" during September 19-20, 2017.

Coordinators: Dr. N. B. Muthu Selvan & Dr. M. Devesh Raj

About the Workshop

The two day workshop was conducted by Indus Auto Technologies using Allen Bradley PLC system & SCADA software. The workshop was able to involve students in a cohesive drive with the academia and industry towards excellence in automation product technology. This workshop was an attempt to cover material relevant to giving students necessary knowledge and skill set to appreciate the rapid changing scenario in automation systems and take advantage of this in their future career. Practical and laboratory sessions were held, which will supplement the knowledge disseminated during the lecture sessions with adequate hands on experience. Workshops were instructor-lead, lab-intensive courses focused on the practical application of technologies through the facilitation of a project-related lab.

Number of Participants: 63

Software Tools : Wonderware's in Touch

INVENTE 2K17

SSN College of Engineering conducted a National level technical symposium **Invente 2.0,** during September 8th and 9th , 2017.

Office Bearers of AEEE:

KAVIN D	-	PRESIDENT
RAHILA MUHSINA A	-	VICE PRESIDENT
PRASANTH K	-	SECRETARY
MUTHAMIL SELVAN S	-	TREASURER
VAIDEESH S	-	JOINT SECRETARY
ARTHI A	-	JOINT SECRETARY

The Department of Electrical and Electronics Engineering hosted 10 events (8 technical & 2 Non technical) under the name **'POWER UP'.** The events are as follows:

1. Paper presentation
2. Project Display
3. Line follower
4. Do U know Arduino?
5. Electronic Maze
6. Technical Quiz
7. Bridge Balancio
8. Bomb Squad
9. IPL Bidding
10. Sherlock Holmes

Also, we conducted a Workshop on **Automated Robotics** by ***Ashtrix Educational Services*.** The session lasted for around 4 hours covering completely about automated robotics (Bluetooth, WiFi etc.,) with live Demo of Line follower robots. Around 800 students got benefited by this workshop.

Technical events:

Out of the 8 events, **Line follower** is a star event which attracted plenty of participants. In the preliminary round, 23 teams participated. 6 teams made to the final round, where the robot operated by the participant traces the black line track accurately, stops at obstacles and continues till the last point as the obstacles are removed.

We received around 125+ papers from various colleges for **Paper presentation,** out of which 20 papers were shortlisted. The judge panel consisted of Dr.M.Balaji, Dr.S.Tamilselvi and Dr.S.Malathy. Finally three winners were announced whose papers focused on Power systems, Electrical Machines and Automation.

The event **Project Display** called for Innovative projects in Engineering field from all colleges. There were about 50 entries. After careful considerations 16 projects were shortlisted for the final round. The judge panel consisting of Dr.R.Seyezhai and Dr.R.Ramaprabha evaluated the projects and the top three winners were announced. The projects were mainly related to the fields of Automation and Electrical machines.

Electronic Maze is an event which involves solving a maze consisting of various paths. Based on the difficulty of the path selected, the participants were given a set of technical scenarios to be solved. Out of 55 teams, 6 teams were selected for finals and 3 teams won the event.

Technical Quiz event is a general quiz on Electrical engineering which had a preliminary and a final round. This event attracted a decent crowd of around 60 teams with excellent standard of questions.

Do U know Arduino is an event which tests people on their knowledge on Arduino. Problem statements were given which were solved by the participants and they were supposed to program it in the Arduino kit provided. Out of 45 teams consisting of maximum 3 people, 8 teams made to the final round and the top three winners announced on the same day.

Bomb Squad event had around 55 teams out of which 6 teams were selected. They were supposed to clear 4 checkpoints with tasks such a solving a circuit, Reduction of circuits etc., The final stage was defusing a bomb circuit in 30 seconds.

Bridge balancio event attracted 52 teams and 5 of them cleared the prelims by solving MCQs. Finalists were given problem statements along with components and they were asked to balance the bridges. The winners were selected based on their accuracy and time taken.

Non technical events:

Sherlock Holmes: This event is basically a 3 round event including Aptitude and Puzzle solving. In the final round, the participants were given a crime scene and they were asked to solve it within a given time correctly. It took in a crowd of around 100 teams at the end of both the days.

IPL Bidding:

This is the all time favorite and crowd pulling non technical event, which pulled in a heavy crowd of around 300 people. After the first round with questions related to IPL, Finalists were selected and they started bidding among themselves to form a team with the best possible players.

Report by,

Kavin D

President-AEEE

PLACEMENTS

Shiva Shankar	Caterpillar
Vigneshwari M	Accenture
Uthamaputhiran V	Accenture
Swaathishree K S	Accenture
Sowmiya A	Accenture
Shunmuga priya S	Accenture
Shri Soundharya J	Accenture
Shiva Shankar B	Accenture
Sanjana M	Accenture
Sajna G	Accenture
Sai Gautham N	Accenture
Preeti P	Accenture
Pavethra R S	Accenture
Pappu Anusuya M	Accenture
Keerthana	Accenture
Kavitha C	Accenture
Kavin D	Accenture
Isha Pathania	Accenture
Aarthi G	Accenture
Aishwarya	Infosys
Aravind	Infosys
Arjun	Infosys
Aswinee	Infosys
Bharath Kumar	Infosys
Chozha	Infosys
Gayathri	Infosys
Isha Pathania	Infosys
Karthik	Infosys
Kavin D	Infosys
Keerthana	Infosys
Saiteja K	Infosys
Mohamed Ayub Khan	Infosys
Narendran	Infosys
Preeti P	Infosys
Priya P	Infosys
Priyadharshini G	Infosys
Ragul	Infosys
Seeranga Nandhini	Infosys
Shabbeer Basha G	Infosys

Shiva Shankar	Infosys
Shri Soundharya J	Infosys
Shunmuga priya	Infosys
Priyadharshini S	Vuram technology solutions
JISHNU RAHUL KANISETTY	L & T Infotech
RAHILA MUHSINA A	L & T Infotech
Aishwarya S	L & T Infotech
JASON PAUL	L & T Infotech
Suganya K	L & T Infotech
SIDDHARTH MUKUNDAN	L & T Infotech
PRANEETH PURUSHOTHAMAN	L & T Infotech
SUBASH KUPPUSAMY	L & T Infotech
BALAKRISHNAA A.V	L & T Infotech
SUBRAMANIYEN RS	L & T Infotech
POMMANNAGIRI A	L & T Infotech
Sai Shankar Narasimhan	L & T Infotech
VEDHA VYASS R	L & T Infotech
LALITH RAJ	L & T Infotech
Kapil Dev Kumar	E-Con systems
Anirudh C	Mu Sigma
Mirudhulla B	Mu Sigma
Mohammed Haris T	Mu Sigma
Siddharthan	Mu Sigma
Sivaramakrishnan	Soliton

We congratulate them and wish them success in all their endeavors.

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?

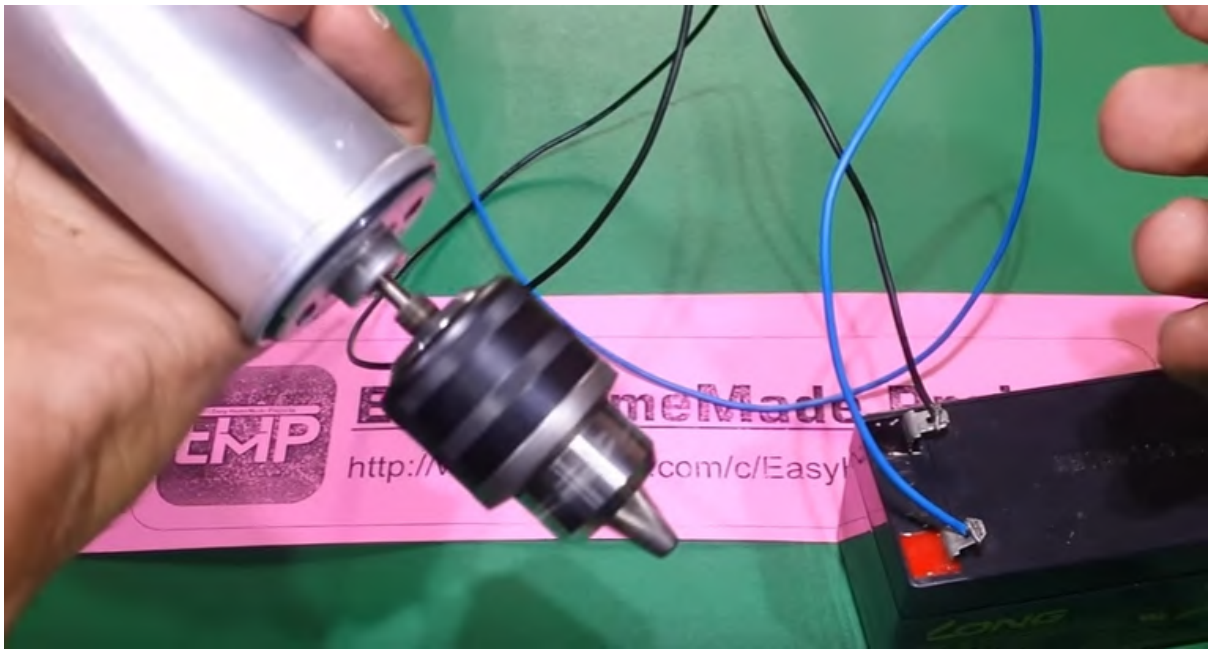
Requirements

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

Isn't it funny that every day seems the same, but when you look back, everything is different?

While your everyday routine will seem to revolve around unit tests, record work, labs and classes, you will soon realise that there is more to college than what you initially signed up for. Friendships that last a lifetime, professors who are nothing short of role models, unforgettable memories and invaluable experiences are some of what will come together to prepare you for a journey ahead called life.

Imagine your life as a blank canvas when you enter college. You are now the dreamer, the illustrator and the presenter. You are bestowed with the brush that could paint a masterpiece. What you make of your life is what you create. The world is more malleable than you think and it's waiting for you to hammer it into shape.

It's common to jump onto the beaten track and descend into the conventional rigmarole and accept the populist belief of focusing only on academics. But here's the problem. Critical thinking is more than just what you come across on the GRE. Presentation is more than just what you do for your project reviews. Writing and speaking is more than just what you do during exams. Decision-making is more than just figuring out whether to eat at the canteen or at the stores.

In short, life is more than just everything we've been accustomed to so far. That's where college steps in and thrusts you into a wonderful journey of forging your individuality. Value the relationships you foster, cherish the little things that make you happy, respect your peers and be passionate.

Something important I wanted to bring up here is the importance of communication. I don't mean just power point presentations or interviews. I am referring to the art of presenting yourself, an awareness of your identity established through your morals and principles. Building confidence and working on your communication skills can go a long way in determining your success as a professional.

I'm also referring to the importance of setting up an active dialogue where it matters. So many of us go through college either rubbishing or ignoring critical issues such as depression, disparate backgrounds, violence and abuse. With so much diversity in each classroom these issues are either joked about or effortlessly discarded because it's 'embarrassing' to talk about.

On the contrary, having conversations about these issues with a good friend or a friendly professor will result in long-standing stereotypes dissolved, mistrust overcome, mutual understanding achieved, visions shaped and grounded in shared purpose leading to the bonds of our community strengthened.

Here's why. This is the truth. Life after college is scary. Every decision is yours to make and **where you end up will be the fruits of those decisions.** You will not have the leeway to adapt in high energy environments and shifting ecosystems. It's going to be a whirlwind ride with challenging and exciting opportunities, constantly demanding your inputs and urging you to create impact and add value irrespective of the field you choose. That is why it's important to dedicate your college life to self-discovery, to knowing and understanding yourself, to figuring out who you are and what you like doing. This does not need to be merely in terms of your career, but something more important - your identity.

If you're doubting yourself, reflect on how far you have come and feel energised thinking about how much farther there is to go. There will be ups and downs. We are what we become from our choices. If you hit rock bottom, then think of it as a beautiful start. You've now got nothing to lose.

Good education isn't just about academics. It's more about discovering yourself and establishing a construct that leads to improving your state of physical, mental and social well-being. It's important to mould yourself into a well-rounded individual with holistic learning and experiential knowledge.

Too generic? Want some examples?

Get involved in extra-curriculars. Organise and participate in events. Take up responsibilities in class. Write and present research papers. Go on immersive industry internships to obtain deeper learning.

Want simpler suggestions?

Read, travel, explore, socialise, get out of your comfort zone and try new things. Your freedom to be original shouldn't be dictated by class timetables and college bus pick-up timings.

In the end, it's not only about growing up and being an Electrical Engineer or a Computer Science Engineer. All that matters is being happy. Your college life should be a collection of experiences you can look back and keep learning from, a set of trials and mistrials to see what worked and what didn't.

Be pro-active and invest in yourself. Conquer your fears. Chase your dreams. Carpe Diem

By Prajay Raghu (Passed out 2016)

EDITORIAL TEAM