



AATRAL

ஆற்றல்



EEE Newsletter
Volume 01 | Issue 01
July - September 2015

VISION

To mold young men and women as excellent Electrical Engineers with the knowledge, skills and character to undauntedly serve the people of our nation.

MISSION

To ensure an enabling educational experience through industrial exposure and integration of theory with application engineering. To provide cutting edge innovative ideas in close collaboration with industry, society as well as other leading institutions.

Electrical Engineers League

The department of Electrical and Electronics Engineering aims to provide the best exposure and coverage of the latest technology used in this field. This faculty aims at bridging the gap between institution and the requirements of the industry. The student's association of the Electrical Engineering department "Electrical Engineers League (EEL)" was inaugurated by Dr. Vivekananda Suresh Kumar, Associate Professor, Athabasca University, Canada, on 31st of January 2013. Just like how the electric eel is capable of generating electricity, the student's association EEL promises to bring about solutions that are challenging the world today. Strom '13 is the department's 1st National Level Technical Symposium to be conducted and we hope that it will turn out to be a platform for engineers to exhibit their technical skills.

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I am happy to know that students have not only taken part in seminars and conferences in other institutions; and they have not only visited industries; but also they have gone out to interact with the children who might need role models and inspirations



From Fr Director's Desk

It is very enlightening to see the contents of the EEE Department News Letter, filled with faculty and students' activities. I am happy to know that students have not only taken part in seminars and conferences in other institutions; and they have not only visited industries; but also they have gone out to interact with the children who might need role models and inspirations. Thus, while letting the light of LICET shine, our students kindle the fire of knowledge in others.

The projects the students have undertaken are very encouraging: The bird that sits on the tree is not afraid of the branch breaking, for its confidence is not on the branch but on its own wings. These projects and internships instill in the students self-confidence and a spirit of innovation. And also it gives them the courage to march ahead: The road to success is always under construction. You keep working on them as you find your way up. But keep the good of the society in mind.

I appreciate the HoD and the Staff for accompanying the students and I very much admire the initiatives and talents of our students. Keep up the good work.

Francis P Xavier SJ
Director, LICET

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INSIGHTS INTO THE DEPARTMENT OF EEE

In our rapidly evolving world, Electrical and Electronics Engineering plays a central role in advancing basic science, creating tools and technologies in order to drive economic development, and meet societal challenges in areas encompassing energy environment and human health.

We extend exceptional opportunity to educate budding Electrical Engineers to

connect ideas in innovative ways and integrate technological solutions into daily life to make a positive impact on the world. Further the available resources help the student community to build upon developments in the basic sciences and apply Electrical and Electronics techniques to address challenges in other engineering and science disciplines.

We wish to state with pride that our department has organized many seminars, guest lectures, and training programs to promote scientific and technical research among academic community to meet our vision and mission. Such programs are carefully weaved to impart adequate knowledge and hands on experience to imbibe employability skills amongst students.

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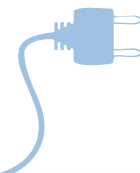
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From Fr Dean's Desk

Respected Faculty and Dear students of
EEE Department,

Happy to know that you are coming up with the first issue of your newsletter "AATRAL", which signifies 'power' for constructive and positive use for the humanity. Thanks for giving me some space to express my strong support and encouragement for this noble endeavor. First of all, let me congratulate the whole Department of EEE for taking up this new initiative. I think it is already overdue considering the power and ease with which modern communication happens among peers, especially among the students and staff in an educational environment. Never too late! Thanks for showing the draft of the first issue. It clearly states the vision, mission and the objective of the news letter. For one thing, it will keep all the students passing through the department alive and well connected with their alma mater EEE department at LICET and through them the industrial world. I am delighted to read three of the alumnae, two from first batch and one from the second who have stepped into the industrial arena, sharing their happy memories of LICET and a couple of advice for their juniors awaiting their moments of smooth entry into the job market.

A department news letter, as I feel, is basically a powerful medium or tool through which everyone in the department or connected with the department is able to share one's views, knowledge or anything relevant for the growth of the department. This obviously will include reports on current activities, future plans and opportunities, success stories and anything that will promote the interests of the department. Today with all the easy and powerful presentation tools, articles and news items can become a visual treat to the reader. I wish every student and faculty in the department make it a point at least once to contribute to the newsletter before he or she leaves the portals of LICET. My salutation and best wishes to the Editorial Board, headed by Ms. Inba Rexy who is both HOD and the Editor in Chief, Mr. Infant Raj, the Associate Editor and the six senior students who are the Technical Editors.

John Pragasam SJ
Dean of Studies, LICET

First of all, let me congratulate the whole Department of EEE for taking up this new initiative. I think it is already overdue considering the power and ease with which modern communication happens among peers, especially among the students and staff in an educational environment.

Congratulations to you and your team of dedicated faculty and students. May the department of EEE achieve more and more and let its light shine brighter and brighter

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From Principal's Desk

To
Ms Inba Rexy
Head of the Department
Department of Electrical and Electronics
Engineering
LICET

Dear Ms Inba Rexy

Greetings.

I am happy that the Electrical and Electronics department has come out with its first news letter, it is indeed a great moment for all of us at LICET and especially for the EEE department.

Congratulations to you and your team of dedicated faculty and students.

May the department of EEE achieve more and more and let its light shine brighter and brighter

Best wishes
Dr Jose Swaminathan
Principal, LICET

From The HoD's Desk

It is very pleasing to congratulate the faculty and students of the Department of Electrical and Electronics Engineering of the LICET who have contributed significantly to the success of the department and also in coming up with the first edition of the E-newsletter with the name "AATRAL". The very name of the newsletter indicates the nature of the Department and the capacity of the students.

Department of EEE intends to bring out the high potentials of all the students creating them relevant and suitable possibilities in and out of the college campus aiming the integral excellence of the students.

Use everything as an opportunity to understand, grow and expand. Undoubtedly AATRAL will offer an excellent opportunity and platform for the students to express their writing talents as well as to report their various field exposures and achievements in all dimensions.

I take this opportunity to thank the management of LICET for their continuous support and encouragement in our initiatives.

With kind regards,
Ms A Inba Rexy



Departmental Activities

INDUSTRIAL VISITS OF THE STUDENTS

First Years

The First year students visited GSV Microtech on 7th of August 2015.

GSV Microtech was started in 1993. It is a manufacturing company located in Porur, Chennai. The company's proprietor, Dr Ramani Kalpathi, shared a small presentation with the students showing them the various instrumentation projects such as ultrasonic sensors, microcontrollers, that the company deals with and explained how they are programmed. The company has products in the Solar and wind energy sectors. It is an ISO certified factory and has complete traceability of the products that are manufactured.

Products from GSV Microtech:

- Micro-Controller
- Data loggers
- Automated Meter Reading (AMR)
- Solar Panels

The students found the visit an eye opener into the engineering stream and they hope to study the products briefed in detail. It was both an enriching and educative experience.

Second Years

On 28th September 2015, the students of II year EEE undertook an industrial visit to BSNL RTTC (Regional Telecom Training Centre), Maraimalai Nagar.

Mr. Balakrishnan briefed them on the history of telephone in the Museum located in the BSNL Building. Then they were allowed to take a look at the various types of ancient telephones, telex, transmitter, receiver, trunk boards, etc.

The students were divided into 2 batches and taken to 3 various labs.

In the OF SYSTEM lab, they gained knowledge about transmission, switching, modulation and optical fibers. The different parts of an optical fiber and their purposes were explained clearly.

In the Axe and C DOT lab, they were introduced to telephone exchange and the principle behind it. They were also shown an old telephone ex-change and the parts in it, which were developed indigenously to cut production costs for rural area usage.

Finally, they visited the BROADBAND lab where a brief gist of what a broadband is and how both voice and data can be sent through the existing telephone lines was given.

Overall, it was very informative and the students found the visit encouraging to learn and to relate their syllabus to real world applications.



III EEE on 30-09-15 at NIWE, Pallikarnai

Third Years

The students of Third year, EEE were taken to NIWE (National Institute of Wind Energy), which is situated at Velachery, Chennai for an industrial visit. The staff at NIWE explained the importance of renewable resources and also the scope of wind energy in the near future. The advancements and developments in NIWE were conveyed to the students effectively. Mr. P. Kanagavel, Additional Director and Head of Information Training and Customized services, NIWE gave the students a presentation on NIWE and its duties. The industrial visit thereby proved to be of great value in the students' profile.

BRIDGE COURSE

The bridge course was conducted for the 1st years from 16-07-2015 to 03-08-2015. It aimed at bridging the gap between High School and College.

The students were taught Phonetics which was very useful in developing their communication skills. The Physics teacher made sure the students knew the correct usage of measuring instruments. The chemistry teacher had taken measures to ascertain the students understood the syllabus that will be taught to them by giving them basics of overall chemistry. Basic concepts in mathematics like Algebra, Matrices, trigonometry and Calculus were revised, followed by a brief intro about computers and their evolution and recent trends in computer technology. The language of engineers is Engineering Graphics, and it was introduced to the

students in a slow and understandable fashion.

Introductory game was the highlight of the bridge course. It was great fun in working together as a team to design and create a working toy out of waste.

Overall, the bridge course helped the students to get to know each other and a taste of college life.

SYSTEM DISCOVERY

System Discovery is a part of LICET Pedagogy conducted in addition to the regular Anna University Laboratory



Sessions during the first two semesters for the First Year Students. Students are trained to explore and understand the working principles and functioning of electrical systems on their own under the guidance of the Faculty. This exercise promotes and encourages the students to hone their self-learning and analysing abilities.

SYSTEM ANALYSIS

The second years were introduced to system analysis where they had to analyze and understand the operation of common household items like Inverter, Mosquito Bat and Starter motor. The students were made to work together as a team. It was a new learning experience for the students.

EDUSAT

Education via technology has been an important part of education. Students are given the privilege of attending online distant classes conducted by distinguished faculty across the nation. The final year students (2012-2016) attend EDUSAT classes conducted by Anna University faculty for Power System Operation and Control. This helps them interact with distant resource people.



II EEE at the BSNL site in Maraimalai Nagar

SEMINARS

S. No.	Date	Name of the resource person	Topics	Company/Institute
1.	04-07-2015	Mr Thirumalai Kumar	Industrial Automation	Process Automation Promoters-Southern region, Siemens, Chennai
2.	04-08-2015	Mr V Velkumar	Electrical Design Automation	CAD Engineer in Nexgen Deisgn CADD Center, Chennai
3.	11-08-2015	Mr Subin Vasu K P	VFD; Field Instruments	AGIIT; Yaskawa
4.	25-08-2015	Dr Ramani Kalpathi	Switched Reluctance Motor	GSV Microtech, Chennai
5.	26-09-2015	Mr Renold Raj Devaraj	Business Analytics	Bennett Coleman & Co

Seminar on Business Analytics

Mr Renold Raj Devaraj lectured on Business Analytics and its wide scope in today's hot job market. He explained about how Analytics could trace the trends in future by looking into the past data available. To put it in simple words, "Business Analyst" could be the fortune teller who would predict the success formula that the industry dearly yearns for. He did mention the importance of having an affinity for statistics to delve into this hot growing domain.

Student feedback

The guest lecture by Mr. Renold Raj Devaraj was new and informative. It was an eye opener to a new subject, Business Analytics which we weren't aware of before. He enlightened our minds with new career prospects in Business Analytics. He conducted the lecture in a very interactive manner and may have convinced a few students to become business analysts in the future.

SYMPOSIUM - STROM 2K15

Strom 2k15, a national level technical symposium organized by the department of Electrical and Electronics Engineering, was held on 25-07-2015. About 270 participants from nearly 30 colleges participated. Both technical and Non-Technical events were conducted. Amongst the various events, there were about 15 technical paper presentations which were selected from a registered list of 37 papers. There was also an event, Circuit Craze, wherein the participants had to debug and analyze the given circuit. Besides these, events like Hyperlink, Techzap, and Quiz-O-Wiz were conducted in which the participants took part actively. Apart from these technical events, in order to entertain the students from various colleges, a surprise event ElectroBlitz was organized. During the valedictory function the HOD felicitated the winners and the runners-up of various events with mementos and cash awards. Event co-ordinators and committee members from our department, discharged their duties whole heartedly. All of these made Strom 2k15 a grand success.



PLACEMENT RECORD

The present Final years of the department had their first placement with LICET's premium partner Tech Mahindra. The students who were placed include Ms Bala Meenakshi, Ms Carmel, Ms Edel Quinn Julin, Mr Mithun V J, Mr Prince R, Ms Rashmytha, Ms Rithika and Ms Shelja Sherlin.



PAPER PRESENTATIONS

S. No.	Name	Year	Host Institution	Paper
1.	D. Durga Devi; S. Subhalakshmi	IV	Dhanalakshmi Engineering and Technology	Artificial Intelligence In Transmission Line
2.	D. Durga Devi; S. Subhalakshmi	IV	New Prince Shri Bhavani Engineering College	Solar Powered ECG Analyzer
3.	Dorothy Josephine; Kavya Elizabeth	IV	KCG College of Engineering and Technology	Wireless Power Transfer
4.	Dorothy Josephine; Betssy Jose	IV	Sri Venkateswara College of Engineering and Technology	Adaptive Cruise Control
5.	Bahulashree P; Betssy Jose	IV	KCG College of Engineering and Technology	Wireless Power Transmission using High Resonance Technology
6.	Bahulashree P; Betssy Jose	IV	Sree Sastha College of Engineering and Technology	Wireless Power Transmission using High Resonance Technology
7.	Isaiah Berlin Lionel	IV	Sai Ram College of Engineering and Technology	Integrated Vehicle Thermal Management
8.	Isaiah Berlin Lionel	IV	Velammal Engineering College	Cervical Guard
9.	Sathish; Sebastian; Thejes	IV	Velammal Institute of Technology	Automatic Irrigation System Using 8051
10.	Carmel; Dhivya Bharathi	IV	Sai Ram Engineering College	Stanene - A path to Better Transmission Line
11.	Catherine Anbarasi; Balameenakshi	IV	Dhanalakshmi Engineering College	Use of Stanene in Advanced Transmission
12.	David Deepak; Mahesh Raju	IV	Sai Ram Engineering College	Artificial Neural Networks

STUDENT ACHIEVEMENTS

S. No.	Name	Year	Host Institution	Paper/ Event	Place
1.	Keerthana J; Sushma A.M.	IV	JNN Institute of Technology	Paper Battery In Pacemaker	2nd
2.	Keerthana J; Isaiah Berlin Lionel	IV	Sai Ram Institute of Technology	Multimodal Biometric System	1st
3.	Isaiah Berlin Lionel	IV	Dhanalakshmi Engineering College	Wind Driven Mobile Charging Of Automobile Battery	2nd
4.	Isaiah Berlin Lionel	IV	TJS College of Engineering	Multi personal Multimodal Cryptography	2nd
5.	Isaiah Berlin Lionel	IV	TJ Institute of Technology	Wind Driven Mobile Charging Of Automobile Battery (EEE)	1st
6.	Isaiah Berlin Lionel	IV	TJ Institute of Technology	Integrated Vehicle Thermal Management System (Mechanical)	2nd
7.	Isaiah Berlin Lionel	IV	SMK Fomra Institute of Technology	Electro Guard: A safety Device	1st
8.	Shilpa P; Noble Emeliya	II	Meenakshi Sundarajan College of Engineering	Gold nanoparticle enabled quick and simple blood test for early detection of cancer	2nd
9.	Prince Inbaraj; Mahesh R; David Deepak	IV	SSN College of Engineering	Arduino Challenge	1st
10.	Prince Inbaraj; Mahesh R; David Deepak	IV	RMD College of Engineering	Tech Quiz	1st
11.	Prince Inbaraj; Mahesh R; David Deepak	IV	MNM Jain College	Project Display	2nd
12.	Mahesh R; David Deepak	IV	Sai Ram Institute of Technology	Tech Quiz	2nd
13.	Prince Inbaraj; Mahesh R;	IV	Meenakshi Sundarajan College of Engineering	Tech Quiz	3rd
14.	Prince Inbaraj; David Deepak	IV	Sai Ram Engineering College	Connexions	1st
15.	Muthamizhmani; Karthick	IV	Velammal Engineering College	Circuit Debugging	2nd
16.	Isaiah Berlin Lionel	IV	RMD Engineering College	Mock Interview	1st
17.	Keerthana J; Isaiah Berlin Lionel	IV	TJS Engineering College	Technical Quiz	1st
18.				Circuit Debugging	1st
19.	Isaiah Berlin Lionel	IV	Sai Ram Institute of Technology	Tech Quiz	1st
20.	Isaiah Berlin Lionel	IV	Dhanalakshmi Engineering College	Mr. Technokrat	1st
21.	Isaiah Berlin Lionel	IV	SRM University	Teen Talk	1st
22.	Isaiah Berlin Lionel	IV	Velammal Engineering College	Code 'C' Debugging	1st
23.	Isaiah Berlin Lionel	IV	SMK Fomra Institute of Technology	Technical Quiz	3rd
24.	Sebastian; Sathish	IV	MNM Jain College of Engineering and Technology	Project Display (Automatic Irrigation System Using 8051)	1st
25.	Muthamizhmani; Karthick	IV	Meenakshi Engineering College	Circuit Debugging	1st

OUTREACH

'KURAL' is a student body organization which has grown from the seed sown by the thoughts and deeds of our Late Former President Dr. A.P.J. Abdul Kalam. His idea of serving the poor through spreading education to the nook and corner of the vast country was conceived in action and actively developed by a group of II year EEE students of LICET.

Their motto is "Kalam's vision is our mission" and 'KURAL' aims at 'serving the nation in whatever way possible', beginning from serving the needy. As an initiative, on the occasion of Independence Day, an Educational Awareness Programme was conducted by 32 students in a Panchayat Union Primary School at Aarani, Sholavaram. They held games and created an awareness among the students on other various social issues.

The students who took part had a great experience of making others learn and learning a lot of new things in the process.



WORKSHOPS

SSN College of Engineering and Technology MATLAB

S. No.	Name	Year
1.	Shilpa P.	II
2.	Noble Emeliya M	
3.	Antony Cassel	
4.	Athen Raj	
5.	Delicia Sharon A	
6.	Keerthana	
7.	Dhireka	
8.	Joylin	
9.	Nancy Mary	
10.	Anbuchelvi	III
11.	Ashika Sajju	
12.	Ramyia Krishnan	
13.	Sindhuja M.	
14.	Raeshma Jaegath	
15.	Rukshana Stephen	
16.	Lubna Tabassum	
17.	Rahim	
18.	Navin Kumar	
19.	Mohammed Numan Ali	IV
20.	Karthick	
21.	Pugazheswaran M	
22.	Infant Felix	

Internet Of Things

S. No.	Name	Year
23.	Shahiedhulla	II
24.	Divya Prasath	
25.	Betssy Jose	IV

Robotics

S. No.	Name	Year
26.	Shahiedhulla	II

Ethical Hacking

S. No.	Name	Year
27.	Pradeep Kumar E	II
28.	Ashwin Raj	
29.	Prince S V	
30.	Raymond Angel I	
31.	P Jeneve Vinolia	
32.	A Cianna	
33.	J Jennis Franklin Princy	
34.	Jose Marlin J	
35.	Vimal Raj S	

AGIT Robotics

S. No.	Name	Year
36.	A Cianna	II
37.	Jothilakshmi L	
38.	Hetty Greena B L	

Jeppiar Engineering College YONS (Peace & Prosperity) Youth Summit

S. No.	Name	Year
39.	Jasmine Mary Zanthia P	IV
40.	Subhalakshmi	

Vellammal Engineering College PLC & SCADA

S. No.	Name	Year
41.	Muthamizhmani R	IV
42.	Karthick M	
43.	Harish B G	
44.	Pugazheswaran M	

"Definition and analysis of profiles based on the use of electric energy in the residential sector in USA" by Sabarish.R, Darshan.V, Prathish. R at Comillas Pontifical University, Madrid, Spain during 02-06-2015 to 08-07-2015

SUMMER PROGRAMME

The knowledge about how a residential client uses the electric energy is very important in order to take decisions in very different areas such as electrical markets, demand responses and capacity of the power system. This project uses a public database including some real cases of use of electrical energy by residential customers in some locations in USA. The main objective of this project is to develop typical patterns of the use of electrical energy. The project is developed with MATLAB software and clustering algorithms including decision trees and neural networks. An exploratory analysis was made to find out the trends in energy consumption across the cities in U.S.A. The analysis is put under complete observation and critical measures are undertaken for ensuring optimal consumption of the available resources across the geographical contour. This assessment is convenient for the rational use of the electrical energy by companies, society and customers.



ALUMNI TALK

Ms Priyanandhini, EEE graduate from 2010-2014 batch

I started my career as a Lean Engineer in Tempel Precision Metal Products Pvt Ltd (A leading company in Manufacturing Electrical steel laminations). After few months of practising Lean and Six Sigma concepts I have moved on to Production department and currently I am an Engineer in Sales and Marketing as Quotation source and Market Researcher. Being an Engineer at this concern is inimitable.

LICET always recognizes their students at the right place, at the right time and in my case LICET has made me recognize who I am! My desire of working for what I learnt in my core field has brought me here but the foundation of mine is LICET. However I always make a point that people spot me as a student of LICET.



My dear friends, continuous desire for learning at every opportunity is noteworthy, think out of box and be an engineer. Never try to comfort yourself instead face challenges and Follow your Dreams.

Ms Nisha, EEE graduate from 2010-2014 batch



A very interesting stream to specialize in. Though the opportunities for this stream right after graduation is less, you can still survive in this discipline. The initial years can be a struggle, but with experience gained patiently, the reward is fruitful! Right now I'm into tender estimation and Detailed Engineering in Electrical and Instrumentation. I like what I do and have the satisfaction that I'm doing justice to 4 years of valuable education. The all around discipline and training I received from LICET, is what that helps me stand firm. Every thought about college life is memorable. But the best moments that I would love to recall always are the practice and preparations for Sports Day and Engenia. The spirit of winning and losing, getting our No due forms signed before the semester exams and rushing past PT Sir at 7.59 am everyday, are few of the many things I cherish! I don't have big plans. I would like to study further and do my Masters. College days, are certainly the best period in anyone's life. Don't let hardships like Arrears and Internal conflicts weaken your motivation.

Ms Aishwarya Snowji R, EEE graduate from 2011-2015 batch

Being an Electrical and Electronics Engineering graduate, the industrial stream is a very tough place where people can get lost in the mere novelty of the ideas that pop up every day in the field. It sure is a fast growing sector with practical knowledge being the emperor. I joined Loyola Institute of Business Administration (LIBA) immediately after my Under Graduate degree in LICET. Finance and Marketing are the specializations I have chosen for my study. 'Why MBA after BE?' is the most often asked question. It is because that I want to become an entrepreneur in the engineering field and I wanted to get the management skills to become one.

I have a lot of memories that are so memorable and close to my heart that has its root in LICET.



For all you student out there, all of this college life may seem tough now, but trust me when I say, these are the memories you are going to cherish in your life. So have fun, don't forget to learn at the same time, enjoy life, LIVE your life.



ELECTRICITY and STUDENTS

Circuit

Wires and pins; big resistors too With inductors in shades of blue, Form complexes in all ways To treat the brain through all days! The mesh of veins that you hide; Hard route maps that you long to ride!

All seem wild but curious though Like the circuit that we build and grow!! The path to the city of 'Electri' is fun When circuits you find all under the sun! Thevenin's and Norton's are great to learn While knowledge is what our dear minds yearn!!

— Isaiah Berlin Lionel (IV EEE)

Hollow Flashlight

Ann Makosinski is a 16-year-old student who competed against thousands of other young inventors from around the world to win first prize and a \$25,000 scholarship at Google's International Science Fair.

She invented a battery-free flashlight. A free energy device that is powered by the heat in your hand.

While visiting the Philippines, Ann found that many students couldn't study at home because they didn't have electricity for lighting. Unfortunately, this is a common problem for developing regions where people don't have access to power grids or can't afford the cost of electricity.

Ann recalled reading how the

human body had enough energy to power a 100-watt light bulb.

This inspired her to think of how she could convert body heat directly into electricity to power a flashlight. She knew that heated conductive material causes electrons to spread outwards and that cold conductive material causes electrons to condense inwards.

So, if a ceramic tile is heated, and it's pressed against a ceramic tile that is cool, then electrons will move from the hot tile towards the cool tile producing a current.

This phenomenon is known as the thermoelectric effect.

Ann started using ceramic tiles placed on top of each other with a conductive circuit between them (known as Peltier tiles) to create the amount of electricity she needed for her flashlight.

Her idea was to design her flashlight so

that when it was gripped in your hand, your palm would come in contact with the top side of the tiles and start heating them.

To ensure the underside of the tiles would be cooler, she had the tiles mounted into a cut-out area of a hollow aluminum tube.

This meant that air in the tube would keep the underside of her tiles cooler than the heated top side of the tiles. This would then generate a current from the hot side to the cold side so that light emitting diodes (LEDs) connected to the tiles would light-up.

But although the tiles generated the necessary wattage (5.7 milliwatts), Ann discovered that the voltage wasn't enough. So she added a transformer to boost the voltage to 5V, which was more than enough to make her flashlight work.

Ann successfully created the first flashlight that didn't use batteries, toxic chemicals, kinetic or solar energy, and that always works when you picked it up.

Time Magazine listed Ann as one of the 30 people under 30 who are changing the world.

— Jasmine Mary Zanthiya (IV EEE)

Source: Internet



ELECTRICITY and STUDENTS

The Unforgiving World

Gone are the days of the Dark Age
When we feared wild animals
Trumpets blow and soldiers rage
Molded by wrath and Frustration

Nation against Nation, Ruler against Ruler
There's no difference between them and the Fuhrer
Watering the soil with blood
Thinking taking revenge would make them like God

Losing our sense of mind about peace
And giving ourselves over to wrath and frustration
We might have changed its definition
Because that's how much we have accepted devastation

I pray to God that we change our attitude
Filling joy and happiness in the hearts of the multitude

Encouraging each other with gratitude
And forgiving each other within every latitude

Then we can hope for our children's future
To be radiant and insightful to every creature
And to learn from our mistakes in the past
And to yearn for joy in numbers vast

And to live in a world of connected harmony
That will wipe out our past's agony
And to learn from our mistakes in the past
And to yearn for joy in numbers vast.
— Rohan APJ (III EEE)



World 'Enlightened' with 'Power'

The beauty behind a CD!

In the recent past, compact discs have become outdated, thanks to the advent of pen drives. CDs don't cost much either, maybe Rs.2 or Rs.5 at the most? Ever wondered how they are made? What are the different principles of science involved in the manufacture of a CD?

Well, the answer that comes first to our mind would be the software involved in the development of a compact disc. But it is not the only science behind its manufacture.

The compact disc and its cousin, the DVD, provide a virtual metaphor for all of physics. Discs rotate, store information and read with an optical system that involves lasers and the reflection, refraction and interference of light. The stream of information coming off the disc is manipulated by physics-based electronic circuitry and, finally, using a variety of physics principles, converted to light and sound for your eyes and ears.

The core technology behind CD reading is optics. The Compact Disc is an evolution of laser disc technology, where a focused laser beam is used that enables the high information density required for high-quality digital audio signals. Hence, knowledge about light and its reflective and refractive properties is essential in designing a CD.

When we play a CD or a DVD in a computer or a DVD player, we hear a whirring sound. That's because the CD rotates inside the CD player. Here comes mechanics into play. The CD spins at different speeds at different times, depending on the data that is read.

CD is a memory storage device. Information on a CD is stored digitally, allowing undiminished quality every time the disc is played. The content stored in a CD is nothing more than a very long binary number! The 0's and 1's can be coded as electrical switches that are off or on in a computer memory as spots that alter the reflection of light in a disc. Hence electronics and electrical knowledge is needed.

On the CD and the DVD, digital information is in the form of tiny "pits" stamped into the plastic of the disc and covered with a thin layer of metal. This points to the fact that metallurgy and material science come into action.

Thus several branches of physics such as optics, electronic circuitry, electrics, mechanics, material science and so on come into play in designing a very common device that we use in our everyday life. So let's begin to explore the science behind every object that we come across everyday to build a wholesome learning experience!
— Silvia Noble (II EEE)



Convergence of nature and technology

TAMIL ARTICLES

"நண்பனே!"

உன்னை நன்ற தாய் யாரென்று யான்
அறியேன்

உன் இரத்தபந்தங்கள்

யாவரும்யான்அறியேன்அன்று

உதித்து ஏருவறையில் பிறவாதிருப்பினும்

இரத்தபந்தங்கள் யாவும் தரமுடியா.

உறவை

இறப்பினும் துணைநின்று பிரிவிற்கு

பிரியா விடைதந்து

நெஞ்சை உறையவைத்த நட்பை.

என்றும் நீங்காத அன்பை நிலையான
பண்பை

நிகரில்லா தோழமையும் தந்து

என்னையும் உங்களுள் ஒருவனாக்கி

இன்னல்கள் யாவிலும் தாயாக

துணைநின்று

இன்பத்தில் இன்பற்று.

என்னால்லான காயங்கள் பல இருப்பினும்

இன்றும் இந்த நண்பர் குடும்பத்தில்,

எனக்கும் இடமளித்த

நண்பர்கள் வாழ்வு சிறப்பாக அமைய

வாழ்த்துகிறேன் இன்று

--மெல்வின் ஜோயல் (IV EEE)

"பாணையும் வாழ்கையும்"

அண்டம் ஒருபாணை என்றால்

அதில் வேகும் பருப்பு தான் மனிதன்

நெருப்பு என்ற சமுதாயத்தில் காயப்

படுகிறான்

கரண்டி என்ற கடவுளின் கட்டளைக்கு

கலங்குகின்றான்

பாணைக்கு உள்ளே இருந்து ஒரு வழியாக

அமைதியை தேடி அண்டத்தை விட்டு

விலகி போகிறான்

--ஐ. சுமத்ரா (IV EEE)



A Click by K. S. Sreekuttan of III EEE on the topic Back to School

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