CIRKYTE

2018-2019

ETSA

ETSA

"Electronics and Telecommunications Student Association" (ETSA) is a student body of PIllai college of Engineering consisting of ETRX and EXTC students. The foundation of ETSA was laid back in 2013 with the sole purpose of providing a platform for students to explore and express their inner talent. After a gap of three years, it has gained back its momentum and is moving forward with the goal to give the students opportunities to gain technical knowledge as well as soft skills through various activities organised by the committee.

The workshops conducted so far have encouraged students to explore their curriculum from a different perspective and have a hands-on experience under the guidance of experts. Apart from focusing on the extension of curriculum practically, the other sectors like communication skills and general knowledge were highlighted well by the events like Saamvad(debate) and Think Bot(quiz). These really helped students to showcase and enhance their public speaking skills and general knowledge.

The association's most unique event is their annual event called "ETSA Talks"which gives the attendees the opportunity to interact with some of the finest public speakers of the country.The ideology behind this initiative is connect students with the vision of successful personalities from a variety of fields, with the hope of empowering them with essential life skills.

ETSA has also tried to expand their reach and inspire many more learning minds with their magazine "CIRKYTE", launched every year that consists of well-documented articles relating to latest technologies and bringing in stories of inspiring people. Beside guiding students, the committee has also organised external events for women's day, community service, and tree plantation.

Although being a young committee ,ETSA's lack of experience hasn't stopped them from standing toe to toe with the rest of the student body's of the college and create a very profound name for themselves.Establishing an all-round development environment for students and guide them on the right path by providing them with ample of technical knowledge as well as social skills is the ultimate goal of ETSA.

GREETINGS

The contribution made by ETSA in providing opportunities to gain immense technical knowledge has been enormous.The professionalism with which their events are conducted throughout the academic year is really commendable.In a short amount of time, this student body organization has made a name for itself throughout the college.This committee not only provides the students of its department with technical knowledge more advanced that the curriculum but also educates them with various soft skills that will help them become better both as an engineer and as a person.

Even though not having any national organization supporting and guiding them like the rest of the committees of the college, the members of this committee have managed to learn all the traits required to make an organization successful, making their work even praise worthy.Since the formation of the committee, the students of the EXTC and ETRX department have gained a lot of exposure in their field,leading to a broader understanding of its aspect and more innovative implementations in it.Given their commitment towards their work and this college, I truly believe that their annual magazine "CIRKYTE" will also be incredibly resourceful to all the students of the college.The detailed information of the advancement in the technological sector together with the stories of people that inspire will make this magazine a good read for everyone.I would like to congratulate the whole ETSA team for their success this year and wish them well for their future ventures.

DR.SANDEEP JOSHI
PRINCIPAL

GREETINGS

I am proud to say that ETSA now stands toe to toe with the rest of the student committees of the college.Even in their inchoate days, this committee carried so much potential , and the students were successful in fulfilling it.The gratification these students have provided to the whole department by the means of this committee is worth great extolling.It has been a pleasure mentoring this students and supporting what they stand for in all means possible.

I am pleased to announce the launch of the annual magazine of this committee, for which students have worked tirelessly.The magazine gives an overview of the technological advancements in the technical sector and at the same time, also motivates students to give back to the society. I wish the students of this committee good luck for their future and look forward to another successful year filled with mind blowing events.

DR.AVINASH VAIDYA
HOD,EXTC

GREETINGS

From a small unnoticed student body of our department, ETSA has grown into one of the most influential student committee of our college.It has been a pleasure to witness the growth of this committee.The efforts taken by the students to conduct each and every event is worth applauding.The committeehas ensured to provide all kinds of opportunities to learn and grow, of which I am really proud.Believing on self-dependency, the students of this committee did not ever complain of any lack of resources and always made out the best of what they had.I am extremely proud of what this committee has achieved in such a short amount of time.

The annual magazine of this committee, “CIRKYTE”, is the perfect example of the hard work, dedication, commitment and capability to think outside the box.I congratulate the team on the launch of its this years edition and look forward to many more.

DR.RAJENDRA KHADE
HOD,ETRX.

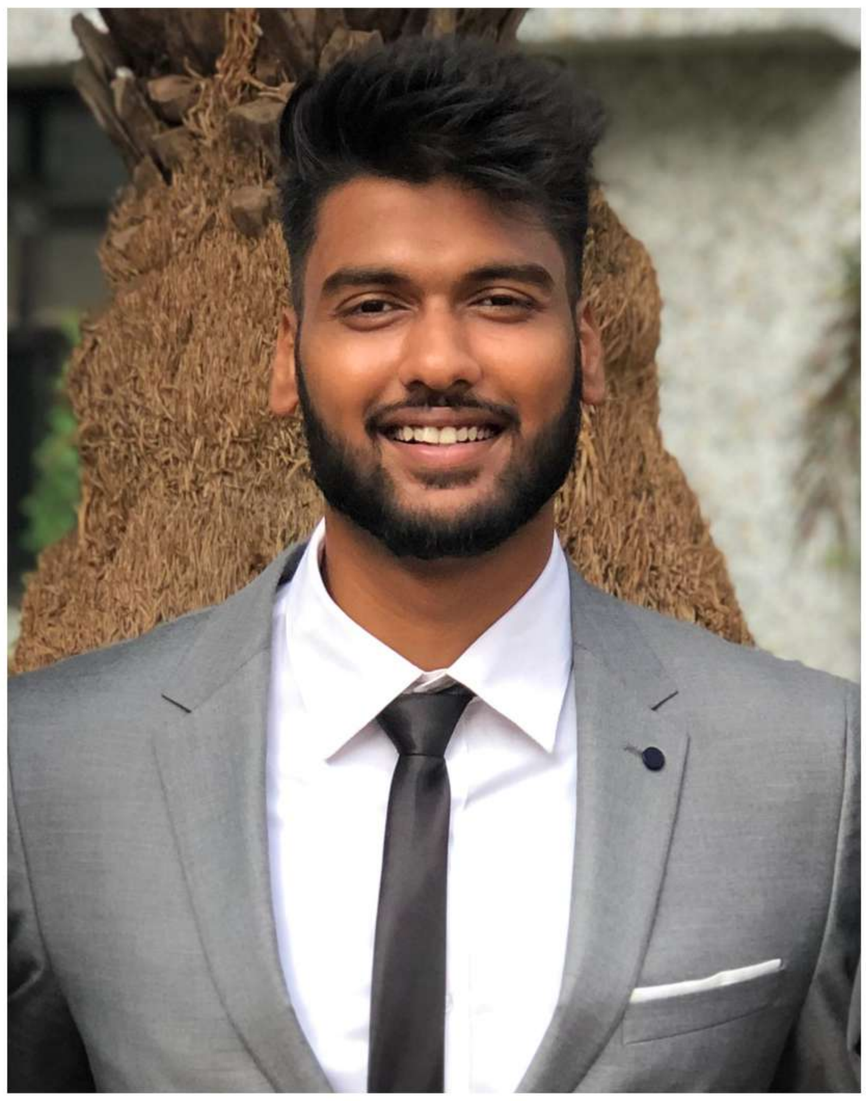
GREETINGS

The aim of education should not be collection of information.Sure it is important, but the main aim of education should be the acquisition of skills that will help you out in real life.Over the past year the ETSA committee has tried to do just that.With the various technical and non technical events conducted by them, the students have gained immense technical knowledge and learned soft skills required in the outside world.I would like to congratulate the whole team for the launch of their annual magazine "CIRKYTE".

I have witnessed first hand the hard work and dedication put behind the publication of it and I am extremely proud of the whole team.The articles published have been shortlisted after going through an extensive process and carry very informative content.I wish the whole committee good luck for their future endeavour and hope for them to surpass the milestones they have set this year.

PROF.APEKSHA CHAVAN
CO-ORDINATOR,ETSA

GREETINGS



The ETSA committee has created opportunities for students in ways unimaginable.This student body has helped the students of their department gain some valuable exposure in the field of Electronics and Telecommunication.It has been an honour being the president of this young, but hard working committee for the past one year and grow with it as an individual as well. Hence,I take immense pleasure in introducing this year's edition of our annual magazine CIRKYTE.

I would like to thank our principal Dr Sandeep Joshi in supporting our committee throughout the year.I would also like to thank Dr Avinash vaidya, HOD of the Electronics and telecommunication department in supporting out ventures in all means possible.A special thanks to our coordinator Pro. Apeeksha Chavan in guiding this young student body throughout the year.

I would like to congratulate our graphics head , Vishal Phalke on designing of such a beautiful magazine.Every inch of the design of this magazine depicts some or the other virtue of our department, thus making it even more special. I would like to congratulate our magazine head, Shubham Khairnar on launch of this year's edition of the magazine and acknowledge the tremendous efforts put behind by him for this magazine.It took a whole year of hard work and dedication by him along with his team in presenting the readers this exuberant magazine.

ASHISH GUPTA
PRESIDENT, ETSA.

GREETINGS

The position of magazine head came with great perks, but even greater responsibilities and it has been an honour being on this designation for the past year.The journey of designing of this magazine was one filled with many hurdles but at the end it was a memorable one. For this year's edition, we decided to provide our readers a source of technological advancements in the sector of electronics and at the same time inspire them with the stories of individuals who are creating a positive impact on this country.With our article revolving around the technical sector, we hope to give the students a way to take an out of the box approach for the projects to be made in future.At the same time, it is important for them to understand the value of giving back to the society and what better way that to teach it then giving meaningful examples.Our stories aim to provide some positivity in this time where negativity encircles our lives.Also, we have attempted to bring out the hidden talents of the students of our department that would not have seen the light throughout their engineering career.By this we wish to encourage the students to not shy away from showcasing their talents to the world out there.To promote leadership, we have also attempted to provide an insight into as how leaders think,by giving the readers an interview with some of the most influential speakers of the country. The designing of this magazine wouldn't have been possible without the efforts of the whole team.Every article written by the editorial team required intense research on the topics, which was done by them efficiently.The layout for each article was designed by keeping in mind the center plot of each story, thus making the reading experience even better.I would like to express my gratitude to graphics head Vishal Phalke for designing the magazine so efficiently.I also thank the whole editorial team for their tireless work and supporting me in the vision I had for this magazine at the start of the year.I would also like to thank the ETSA coordinator Prof.Apeeksha Chavan for her constant support throughout the making of this magazine. I hope that the readers take away immense joy and inspiration form this magazine and it helps them in some part of their life.I wish the future committee of ETSA good luck and hope that they achieve even greater heights with it.

SHUBHAM KHAIRNAR
MAGAZINE HEAD

GREETINGS

Throughout the year, ETSA had one primary goal and that was to provide students with opportunities to discover their hidden skills.Often it is difficult to find a source of inspiration to get motivated from.By the means of this magazine, we aim to provide our readers with a place they can look to for ideas and inspiration.

The opportunity to design this year's edition of this prestigious magazine was nothing short of an honour.Every bit of it has been designed to enhance the reading experience of the readers and make the content even more intriguing.

I would like to congratulate the magazine head , Shubham Khairnar on the publication of the magazine.What was mere an ideology for the magazine a year back, wouldn't have been turned into reality without his guidance.I would also like to thank thee rest of the team for the efforts taken by them in making this magazine possible. Lastly, I hope for this magazine to be beneficial to all our readers and has something for everyone to take back from it.

VISHAL PHALKE
GRAPHICS HEAD

Contents

TECH CORNER

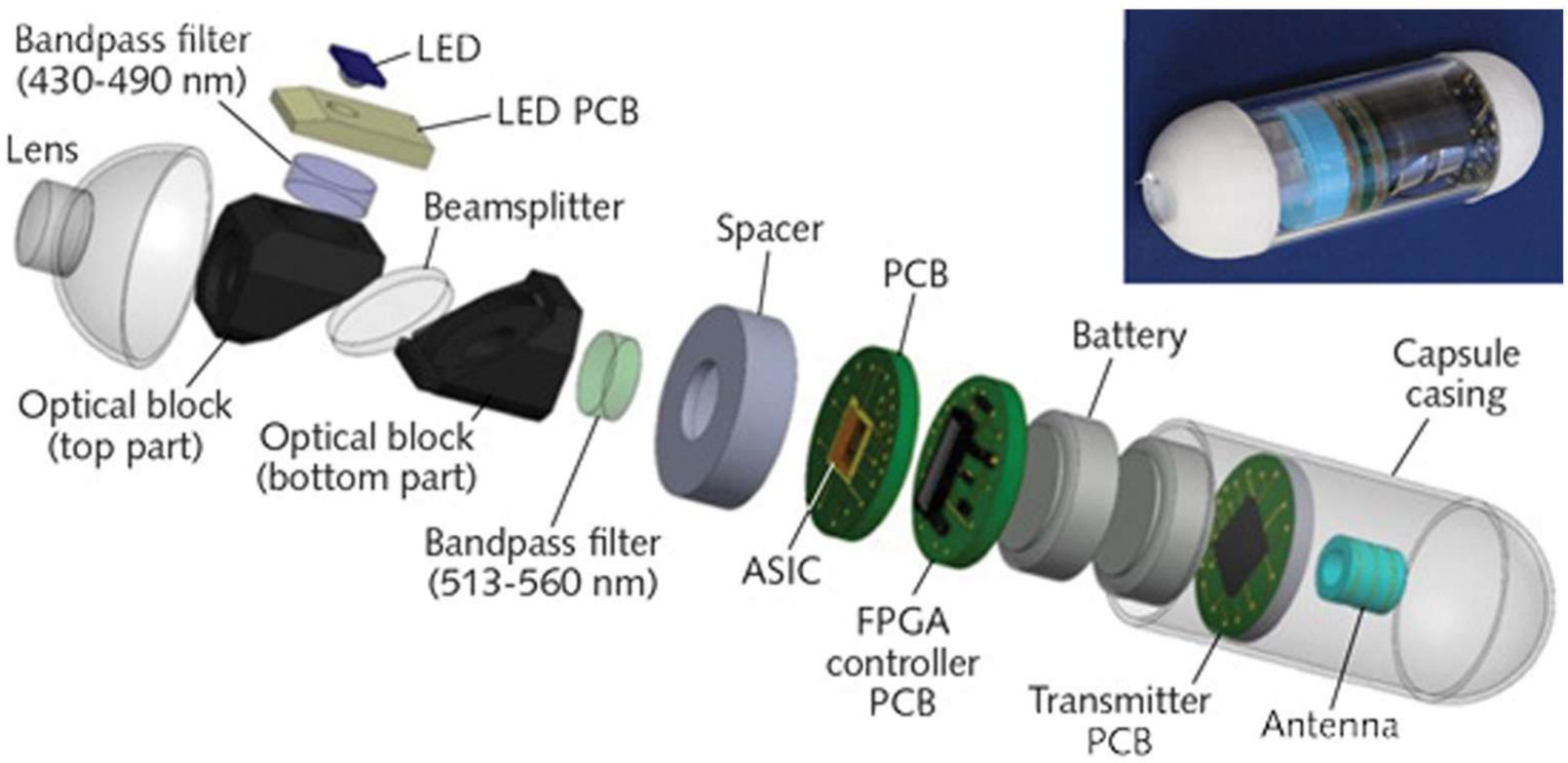
Having trouble finding inspiration for your next project? Maybe these can help.

ELECTRONIC PILL

BY DIVYA WAIRKAR

The revolution in technologies is showing great changes in the medical fields .The ability to combine information and function from various devices to personalize treatment presents enormous opportunity to both improve health and reduce costs .And these trends support the demands for individuals to assume greater control of their own health state .

One such concept is that of the Electronic Pills .In 1972, Professor John Cooper and Dr. Eric from U.K has led to the development of electronic pills. This electronic drug delivery has come into reality with its Intellicap Technology. The device is constructed in a small Pill shaped capsule that is swallowed and passes through the gastro-intestinal tract. While in the body, the capsule takes measurements of the local pH, temperature, oxygen level, etc. This data is reported by wireless RF communication to an external unit and may be monitored at a computer or mobile .Additionally commands are sent to the capsule while in the body. Mainly electronic pills are classified into two types; first one include camera ,which collect disease detected areas and send it to the system, and the second one contains only sensors. The recent research saw this Intellicap system performing in a new way-this time required to operate as a sampling device rather than a delivery system.



This pill is powered by a battery which lasts for 40 hours which is sufficient to carry out any type of complete internal diagnosis. The use of semiconductors in this device provides ease in the development of concise electronic pill capable to carry and transmit huge amount of data at a time without affecting the human body. After diagnosis the electronic pill can come out through a bowel movement. On the other hand, to carry out this process efficiently a radio system of high capacity is needed to get real time videos of digestive system wirelessly. This requires upper wide bandwidth transmitter and receiver .But tissue damage at high frequency limited its usage. Research work is carried out to get detailed images of internal parts through high frequency transmission and reception of data .In medical field electronic pill is now said as" Magical pill for health care".

In future, one objective would be to produce a device, analogous to a micro lab on a chip sensor which is not only capable of collecting and processing data, but which can transmit it from a remote location. Although expensive, they have excellent monitoring system which not only helps us to detect the diseases but also take sudden action against it. Thus, these electronic pills have truly proved to be the holy grail of healthcare technology.

Wired Greenhouse Tech

Making farming possible in impossible places.

By Shweta Mane

Agriculture is a huge process just as its long name starting from preparation of soil to the storage of harvested crops. Many parameters are involved during the process that can either speed up the growth or just impede and create problems (i.e. due to low supply-high demand). And Situations get worse when the demand is high for specific plants. One additional problem would be transporting the native plants to different regions, thereby adding the shipping costs and increasing carbon footprint on earth (i.e fuel required to transport them). Technology has been trying to help us to speed up the growth of plants by rigorous analysis and also protect them by destroying the plant enemies(e.g. weed). Thus, proving utilitarian as the most of times it has
been to us.

Listing out the basic necessities of plant life, which consist of water, sunlight, soil, air, microorganisms, organic and inorganic compounds, temperature and many more. Since the advent of the greenhouse, scientist and researchers have tried to create artificial conditions by studying these necessities. Greenhouse not only supports the demand for food in a certain region but also saves money (that one incurs by ordering overseas). What is advancing for agriculture alongside greenhouse is the most supplementary backing provided by Customizable LED lighting, Remote monitoring with help of Internet of Things, and Computer Simulation Softwares.

The most recent example would be of an Arctic Inuvik Community in Norway. Where the best summary of the problem can be highlighted by the cost of 1kg potatoes (i.e. Rs. 791). Which are shipped from other regions. Climate and remoteness of the region are two main characteristics that the community needs to battle with in order to fulfill the food demands. This Arctic greenhouse which covers an area of 16,000 sq-foot, operates in summer and produces a fraction of food for 3300 people.

Ray Solatki, director of this arctic greenhouse, is raising funds to make the greenhouse grow plants year-round with help of led lighting, remotely operating the nutrients requirement of a plant and enhancing the building design to boost production and cost-effectiveness. The bonus of planting a greenhouse in such regions is providing jobs (whichis desperately needed in such remote communities) of monitoring the whole greenhouse while experts are away. Ray is working more on soil- based crop growth while there are new techniques of growing plants in water (i.e. hydroponic plants). A hydroponic tower of modular farms, an Ontario-based greenhouse company, whose primary module measures 44 feet long, 10.5 feet wide and contains 240 vertical hydroponic towers that can grow more than 3,800 plants under LED lights. An HVAC system maintains climate control and the custom-made steel walls are so well insulated that a module in Toronto did not need heat turned on at all last winter, as the excess heat produced by the LED lights and dehumidifier was sufficient. Also, the modules include a wireless monitoring system that tracks conditions like heat and humidity in the air and the chemistry and nutrient levels of the growing solutions the plant roots rest in.

Just like the above hydroponic technique of growing plants, a new method of modifying the wavelength of light is equally beneficial. Chinese researchers have found that growing lettuce in blue light will have higher levels of important nutrients that have health benefits.

Lastly, the most profound advancement in relating to agriculture is done with building simulation software that can predict the most less time-consuming crop breed or enhance certain desirable traits in a matter of seconds. This digital 3D model of plants is called in-silico (in-silico refers to silicon computer chips). Scientist study plants behavior and then create statistical models that can help them to find out a plant which can prove more beneficial for farmers in the future There are many more factors relating to root growth, microbial interaction that are under-research (which are destined to be converted into a code by these profound researchers) which will definitely help us someday. Before converting these things into a code, they need to collaborate well with biologists to understand how it works in real life. The global food security problem will be certainly helped out with these technologies. As in the near future where the population will further shoot up and future soil is predicted to be having fewer nutrients, making it compulsory to grow more with less.

Don’t wire a circuit, draw it!

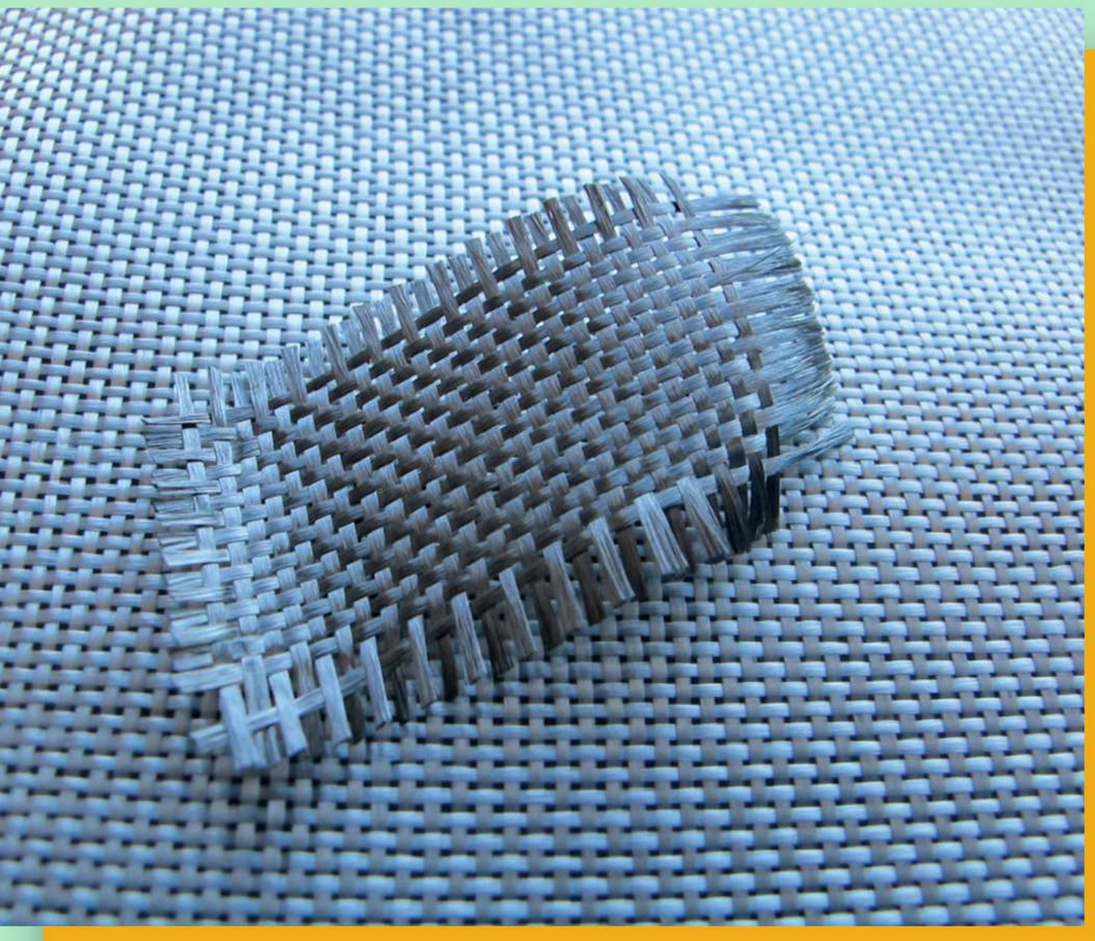
By Shweta Mane

One of the most stultifying innovations in the field of electronics is the circuit scribe pen, whose ink is silver conductive! Yes, and it is a boon for those who are constantly in contact with designing, implementing and building circuits. The ink consists of silver nitrate and other compounds that let it be smooth and viscous as ball pen ink. Developed by “Electroninks team”,this is a useful instrument for high school students as well as electronic and electrical engineers,.It can be added as the next common thing that they all share after normal pens. When an invention comes it just can't come alone, it brings on many new applications, gives space for more ideas that start ups can hold onto, thus sends a wave of transformation around for many imaginative minds out there.

The main idea motive behind this invention is act as an efficient alternative to the standard breadboard and wires with a pen that can draw circuits on the paper (the lightest substrate available easily), wood, plastic and textiles. One of the factors that needs to be considered while making an innovation is the space it takes up and its impact on a sector. If we peek down in the history of circuit making, we can see how hand-wiring each component with a different color of wires was difficult. Thus, paving out a way for printed circuit boards (PCB). The use of this conductive pen not only reduced down the space but help in optimizing the circuit characteristics as well. Electronic students must have faced the regular encounters with the soldering gun. Heat it precisely then take the solder wire, attach the components, then again heat it, the process goes on and sometimes the PCB is burned out . This all chaos can be avoided at the expense of this pen and the kit components that consist of a magnetic sheet and components with a magnetic base to keep the things firm and in place on the paper. Moreover, uses can be extended to redesigning TV remotes, computer touch pad, and switchboards. Later about the maintenance part, if there is a wire or pen line damage it can provide a quick fix with one in your pocket.

Keeping aside the technical uses and going for the creativity part (other name fun part). We can create cool birthday cards for our dearest ones with that lightened candle on the cake with simple circuit on back side. Quick shining banners for the next advertisement or shop display. The beautiful handmade lantern or paper led borders that you would love to hang in your balcony. Else you can wrap them around the Christmas tree and showcase your skills with the power of the pen and unique imagination that you possessed from a long time. Finally, taking an interdisciplinary approach (i.e. creative-technical part) architecture student can too add extra life to their miniature paper models (for instance, street-lights and paper cars, windmills etc) that would let the viewers connect more. Although the pen is not cost friendly, it is the next step towards smart and efficient methods for electrical engineering.The standard procedure of making circuit boards although maybe systematic, are quite a long process and require utmost precision.However the use of this pen solves countless problems, making it a must-use invention for the future electrical engineers.

Embroidering Electronics Into The Next Generation Of Smart Fabrics



Ideally, the electronic components of garments - like sensors, titanium, aluminium are used in such a way that the wearers don't feel their presence. But, some embroidery works done by antenna threads are not washable so they need to be detached before washing. Let's deeply talk about the antenna embroidery - these "e-threads" are made in the ElectroScience Laboratory of the Ohio State University. They are aiming to make these e-threads equally flexible and washable. These "e-threads" are basically bundles of twisted polymer filaments to provide strength, each with a metal based coating to conduct electricity. Tens or even hundreds of filaments are used to make on "e-threads". These threads are normally used like any other embroidery thread with commercial embroidering equipment.

The clothing sector has had a major change in its designing aspects after the introduction of flexible electronics in its manufacturing, such as Gore-Tex is used for all-weather clothing and shoes because it is breathable and waterproof, Kevlar is a high strength, flexible and light weighted fibre used in police bullet proof vest. Several companies have also managed to include titanium and aluminium into the fabric to give the wearer a cold sensation during workout.

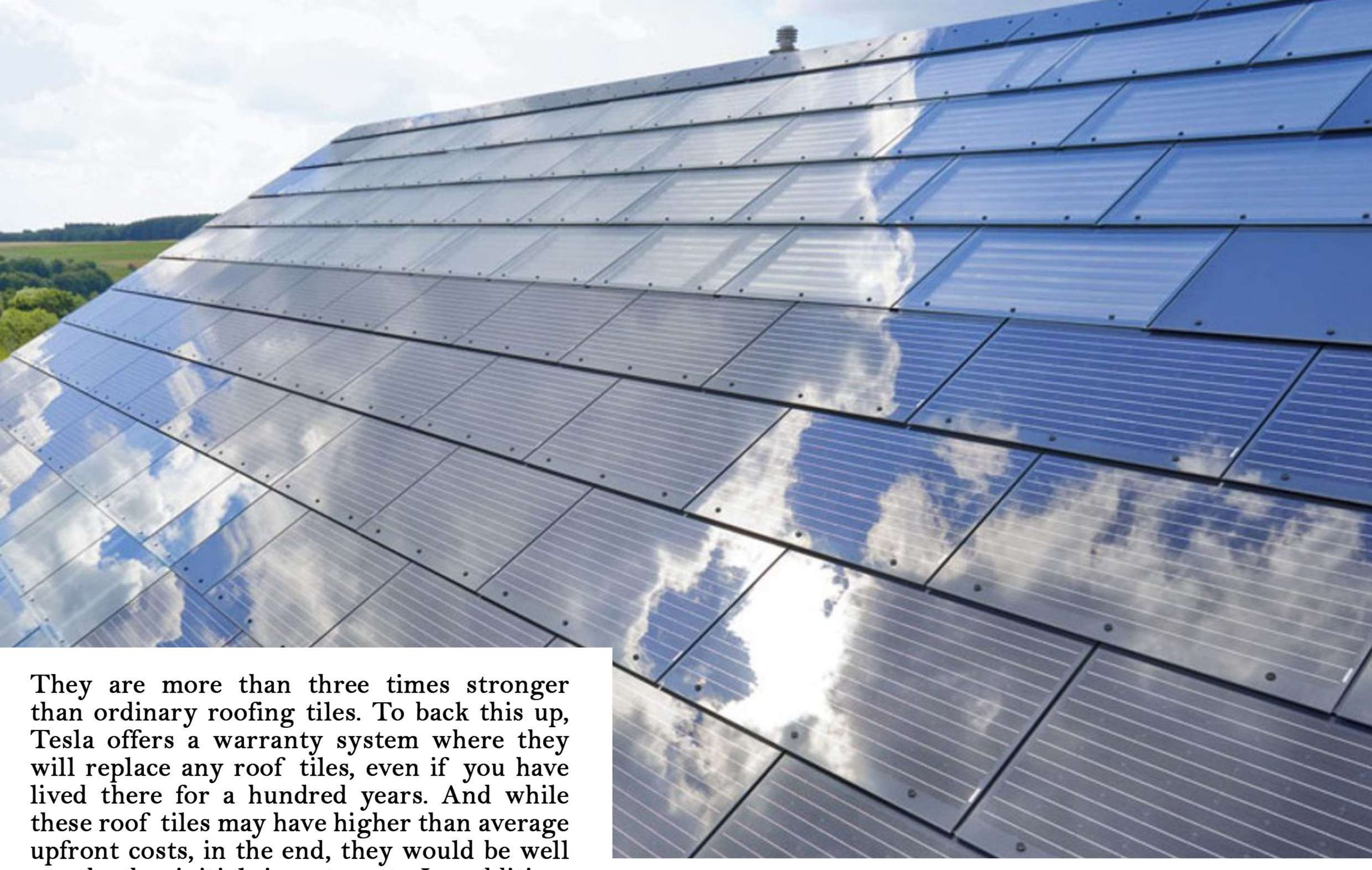
Moving further, other than antenna, this laboratory works on making of flexible fabric - based miniature power generators. They use ink-jet printing process to place alternating regions of silver and zinc dots on the fabric. When both the metals come in contact with any fluid discharge from our body, silver acts as anode whereas zinc acts as cathode and thus there is flow of electricity. We can produce small amount of electricity just by damping the fabric and without using any additional components or circuits. These fabrics are very flexible and washable. The power sources of these fabrics can be connected to other wearable and thus remove the issue of extra conventional batteries. . These wearable electronics are used in clothing in such a way that any sensing and communicating devices making this 21st century more interconnected and more advanced.

Tesla Introduces Solar roof: More efficient but less costly than your ordinary roofs

By Shweta mane

As solar panel technologies have increased, so has the demand for solar related products. With this in mind, Tesla has recently introduced a line of solar roof tiles. And while Tesla solar tiles are new to the industry, they are sure to gain attractions as more homeowners begin to realize their benefits. They are unlike traditional solar roofs wherein every tile contains one solar cell and function as conventional roofing materials producing electricity as well!

The technology behind the first solar roof tiles was developed in 1970s. It uses new solar cells developed with Panasonic where they had to develop a complex connector technology to link all the tiles in an efficient way. Integrating solar cell into roofing wasn't a new idea, but making the solar cells present in the tiles undetectable from street view while still capturing sunlight is an innovation. Solar turns sunlight into electricity obviously. They generate power and also double up the roof . Tesla actually offers two types of glass tile, solar tile and non solar tile. It also offers a calculator directly on its website so you can get an estimate of what you need.The Tesla solar roof is basically building-integrated photo voltaic (BIPV) product that takes the functionality of solar panels and integrates it into roof shingles. A home with a Tesla shingles installed would have both a protective and complete roof and the capacity to generate solar energy, without installing solar panels as well. Tesla has said their roof will cost $21.85 per square foot. The simple context is that the roof will be very expensive compared to any common roof installation, but could be competitive in terms of long-term benefit when the energy savings are factored in. These tiles will not degrade over time, like regular asphalt or concrete tiles do.



They are more than three times stronger than ordinary roofing tiles. To back this up, Tesla offers a warranty system where they will replace any roof tiles, even if you have lived there for a hundred years. And while these roof tiles may have higher than average upfront costs, in the end, they would be well worth the initial investment. In addition, there are four different styles of solar roof tiles from which homeowners can choose. So no matter what type of house you have, there is bound to be an adequate solution. Furthermore, since the Tesla roof tiles are solar powered, there's no need to rely on the electric company to provide your home with power. This helps reduce the amount of coal and oil being burned to produce electricity, thus creating a more eco-friendly solution. It also means that the power won't go out during an outage–a huge advantage to anyone that lived through Super-storm.

The CEO of Tesla, Elon musk tweeted that the first solar roof deployments will begin in summer 2019. He says“I think there’s quite a radical difference between having solar panels on your roof that actually make your house look better versus ones that do not, I think it’s going to be a night-and-day difference."Thus, Tesla has grown to become one of the premier automakers in the world by producing vehicles that can run on electrical and solar power. In line with this, the introduction of Tesla solar tile roofing solution makes a place of standard shingle roofs in the not too distant future.

Stories which Inspire

Get a dose of positiveness by reading the stories of somecommon people who have done some

Meet Hina Jaiswal
India's First Woman Flight Engineer

By Sakshi Salvi

Flight Lieutenant Hina Jaiswal from Chandigarh created history by becoming the first Indian Woman Flight Engineer in the Indian Air Force. Hailing from Chandigarh, a girl with big dreams and goals in life. She was a person who thought dreams and goals are what we live for and that is what fuels us to move towards what we want to achieve in our lives. She aspired of wearing the soldier's uniform and touch the sky as an aviator since childhood. And she achieved this dream when she was commissioned as a warrior on January 5, 2015, in the engineering branch of the Air Force.

Successively after Hina Avani Chaturvedi, Bhawana Kanth and Mohana Singh became the first women fighter pilots to be formally commissioned by the Indian Air Force on 11th July 2018, thus setting an example for the girls out there that women can walk hand in hand with their counterparts in this field as well. Hina had to undergo extensive training in the Indian Air Force Academy during her course for the pilot and ground duty officer and gave tough competition to her counterparts. The training at the Air Force Academy is designed to inculcate moral values, leadership qualities, sense of honour and duty and the will to win in the Flight Cadets.

Flight Lieutenant Hina Jaiswal completed the six-month flight engineer course from the 112 Helicopter Unit attached to the Air Force Station in Yelahanka, Bengaluru. Earlier the branch was restricted to men only but now since 2018, the branch is open for women as well. A flight engineer is a part of the flight crew who monitors and operates the complex aircraft systems. He/She is specialized in various skills. During her 6 months of training in the academy, she trained shoulder to shoulder with the men and proved her capabilities and displayed her commitment. Hina is now posted to a helicopter squadron where she is monitoring and operating IAF's complex aircraft in various conditions, including the Siachen Glacier and the Andaman and Nicobar Islands, a press release by the Defence Ministry states.

Meet Gaurav: A man with a vision to change the outlook of the failing education system.

By Shweta Mane

Gaurav's resilience :
Have you ever went through a difficult phase in life and came out well out of it. Then when times were good, you found out that there are people who are suffering the same difficult phase as yours or going to suffer, then what will you do for them? Walk away thinking that they will cope with it as you did or try to make things easier for them.

The latter path is rarely selected and this story is of that person who did things unusual. Gaurav, from Farrukhabad in Uttar Pradesh, has a background story that can be relatable to many people out there. But the after-story makes him unique. He completed his primary education in Hindi medium from a school run by an NGO. When the financial situation was still at odds, he was adamant about receiving education, but life hit him hard when secondary education was offered in English. He took a step back, went to his village, took the higher secondary education in Hindi but this drawback answered the big question about what he will be doing ahead in his life professionally.

Knowing how education is important for a child irrespective of caste and class, and knowing how English can be a crucial parameter for all, this all gave him an impetus to pursue Bachelors' in Social Work. He got admitted into Indira Gandhi National Open University. Right after the admission, he did two things, one, he joined an NGO where he took the job of a remedial teacher. And second, he formed a theatre group called 'Naughty Sitare' which allowed youth from his resettlement colony to showcase their talent. At the same time while aiding many to follow their dreams, perform street plays etc Gaurav also bagged a chance to complete his dream (which he had back as a kid) to be part of a theatre group.

After this, Gaurav's friend recommended him to apply for SMILE In-turn-ship, a programme by Pravah. That 3-6 week's volunteering programme helped him to deeply understand the education problems faced by rural India and shaped the way he thinks about these problems. His task was to improve the English of various rural kids, along with this he improved his English too. Inspired by this, he made a group called 'English Warrior'. He decided to take a step forward and decided to join the next fellowship programme by pravah where his aim of "educating all" took more momentum. His task here was to connect SMC (school management committee) with the government officials and local people by organizing workshops.

For this purpose, he formed a group called 'sabwa' and hopes that it runs beyond the fellowship programme of 6 months. Sabwa, beside its main purpose, has also helped 8 girls to pursue the commerce field (despite the field at school required a minimum of 10 students to offer the course.

By this time, he has completed his degree and continuing with his fellowship, he aims at furthering his academics with Master in Development course of Azim Premji University (APU). His story sets an example that how drawbacks can be used to plan out a career for yourself in social work and millions out there at the same time. His story says it all, realizing how education is important for yourself, and others as well are two different things. The power of knowledge increases exponentially when shared among others. If there are people like Gaurav in India, a rising economy and failing education system won't be a paradox anymore.

THE BOOK THIEF

BY DIVYA WAIRKAR

Encouraging children to steal books, but for a good reason.Meet Darjeeling's Srijana Subba.

Famous writers of all eras always say that books are the road, the journey, and the destination. They communicate knowledge and also the wisdom of all kinds. When you open a book, you also open a new world built by millions of writers and poets all around. One of the famous stories in relation to book reading is about a woman from Darjeeling.The protagonist of this story Srijana Subba is a teacher, Poet and writer. In one of the Interview, she says her parents were primary school teachers, and a large part of the fascination with books began because of them. Her mother told her that her first book pick was the dictionary. When she taught little Srijana to use the dictionary, the first word she chanced upon was 'the butterfly.' "Thus began my tryst with words and books," she says. She had a good collection of books and thought of making the best use of it. So to put them to good use, she started a library, which she calls 'The Book Thief.' Years before she had to sell her car for some reason due to which her garage remained empty. A idea of setting up her own library popped in her head. She made this possible without any support from the government or any organization.

She says she wanted her own space without any rules just like an envisioned open space. Therefore, she then built the library from her collection, donations rom friends, and well-wishers. Her library has more than 500 books that cater To all genres. Children of all ages come to the library. Her library is also helping a lot to bring about a change in the attitude of children. According to her the three tips for every parent to inculcate the habit of reading is by reading to them during bedtime, listen to their children tales, and make provisions for easy access of a book. "The more you read to them, the better their stories will get. Do make the time to sit and listen to all the stories that children come up with. You will be amazed at their sense of imagination.," she says. The surprising thing is that the youngest member at the library was a three-year-ol boy. Srijana is thrilled at the response the library has received. These all avid readers keep her motivated.

Srijana can be best described as a bibliophile whose mission is to ensure every child in her village has a book. In an exclusive interview with Better India, Srijana shares her passion for reading.

"The more you read, the more well-read you are." In simple terms the more you read the more exposed you are, your attitudes, your ideas, and your imagination changes. Thus, nothing can add to our intellect more than reading a book. It is rightly said that they are the quietest, lasting friends, the wisest counselors and the most patient teachers ever.

THE REAL HERO

BY SHUBHAM KHAIRNAR

Often while traveling on a national highways we come across animals injured because of the incoming traffic. Although we see them suffering, we never think it as out responsibility to tend to their wounds or see if they survived or not.There innocent animals never get the aid they need and end up dying on the road itself, unnoticed by the vehicles commencing around it.There are however , a few noble souls who value the lives of these animals above theirs and have the desire to help and protect them in any way.Peera Ram Bishnoi, a mechanic from Rajisthan is one such person, who in the past 10 years has saved over 11,00 animals.

Born in a farmer's family in a small village near border of western Rajasthan, Peera Ram often saw Peacocks, rabbits, deer, other wildlife when he toiled with his parents on the farm. He often used to ask his parents about why they let the animals do as they please, to which they answered that they were as dependent on they as they are on us. Gradually, he got fond of these animals and couldn't be separated from them.

Having a small tire puncture shop near the national Highway-56, Peera often heard from the passing drivers about animal accidents. There were no guards or authorities around a 300-km radius to hep these animals which made him feel helpless. Finally he decided to take the matter in his own hands when he saw a chinkara wail in pain and drag itself to the side of thee street after getting hit by a car.Peera took the injured animal to the nearest clinic and paid for the treatment himself. After this incident, there was no stopping him from rescuing these animals. Over the next five years, he took all kinds of distressed animals and birds home to nurse them back to health.His family, who loved animals as much as him were more then happy to see him do such a noble work.

Peera has rescued rare species like the Blackbuck, Indian hare, migratory Demoiselle, Hanuman Langur and desert fox to name a few.To expand his work, he decided to register a NGO independently , Peera , along with four other activists set up an organization called the 'shri Jambheswar Paryavaran evam jeev Raksha Pardes Sanstha' on June 5, 2012. His worked inspired many people around the village, who all came to lend a helping hand.

What started in a 50x 50 ft shelter, has now turned into a lush green farm spread over 2.5 hectares, where almost 2000 people work and 450 animals are treated at a time. Peera has put in his own money for the construction and facilities, but his well wishers have also helped him a lot in the functioning of the shelter in the form of donations and manpower.He prides in the survival rates of his shelter which is of 45 percent, far better compared to the veterinary hospitals whose rates are ass low as 11 percent.He believes that there is a difference in which the animals are looked towards in his shelter and the clinics." In government veterinary hospitals, people work in shifts and for salaries.our work, however, is ruled by emotions, is straight from heart and round-the -clock.", Peera said while talking to The Better India.

However Peera is taking all these efforts for a noble cause,the poachers and hunters were not happy with his work, for he was hindering with their business. Complaints were sent by these hunters to the forest authorities saying that they were harboring wildlife in the confides of their home and treating them poorly. The authorities arrived at their home with thee intent of arresting him, but were astonished by the work he was doing."The authorities congratulated me on my work. I showed them my membership as part of the larger organization conserving wildlife , and they decided to help me. They help me acquire government.", Peera told The better India. The forest department also ensured that he was given guards to patrol the sensitive areas regularly.There have also been a few attacks on his life,none of them threatening enough to scare him away.He says that he would rather die protecting the animals than stand by and watch the massacre.Peera refuses to step back against these hunters and poachers and says that there is a legacy in his family of sacrificing lives for protecting trees and animals, referring to Amrita Devi, who in the year 1730 was beheaded along with her three daughters and 300 other Bishnois while they clung to the Khejri trees to protect them from being cut down.He values the lives of these animals over his any day and so do his fellow workers, one of whom recently died protecting an injured deer from a few Rajputs.

The Royal Bank of Scotland foundation recently felicitated Peera with the Earth Heroes Award at the eight edition of their award.N Sunil Kumar, head of the RBS foundation, says that Peera has not only put significant amount of time and resources in helping these animals but also build a community around it."Compassion and conservation are two different things. And Peera Ramji's work is taking compassion to an institution level.", Sunil told The Better India.According to Peera, there are a lot of people like him who have the vision and will to help these animals, but lack the resources.If the privileged people support them financially, they could make the world a more compassionate place.

A conversation worth reading

We got the chance to ask a few question to two of the most influential speakers of the county.Read on to get a glimpse of what goes on in these brilliant minds.extraordinary work.

MR.PRAVEEN WADALKAR

Co founder & CEO of Techizer.
Business storytelling coach.
(7 times international tedx-

Praveen Wadalkar is a founder of Techizer, a real life story teller and a 7-times international TEDx Speaker. As a story teller, he loves to depict his real-life experiences in the form of stories.he is also a HMI certified mountaineer, which gives him the opportunity too meet various kinds of people and pick several stories which he in turn shares during his talks.After Praveen's phenomenal speech at the ETSA talks,we got the opportunity to have a small interview with him.Read on to what he had to say to our questions.

What motivates you to do what you do?

The answer would be the way I look towards life. The only thing that motivates me is that I wait that one day I will find my passion and once I find my passion, then I'll see how to work on it. Whatever I have in my heart, I do with utmost passion. When I was a medical representative, I did things differently. Now that I am an entrepreneur, I have a different perspective towards those things and when I am a mountaineer, a solo traveler I will do it in and even more different way. I started speaking two years ago, and within these two years I have reached ted-ex stages 7 times. I have reached IIT, AIM; why because I am doing it passionately. So, whatever you wish to do, make sure you do it passionately.

Who according to you is a great mentor?

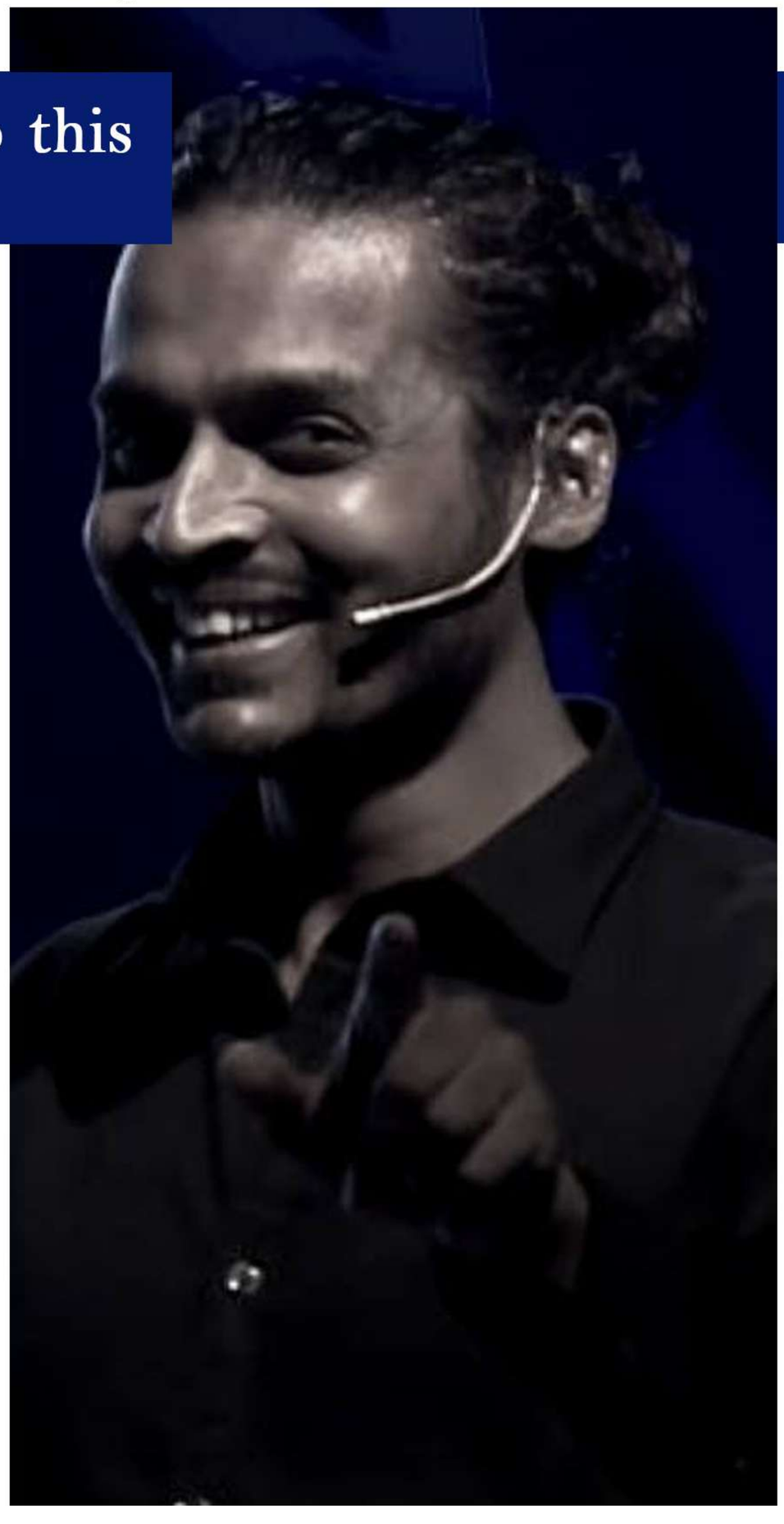
I believe that any person who has achieved what you wish to in your own life can be your mentor. When I wanted to write my first book, I thought who is the global authority in teaching me how to write a book? So, I started following Garry Robert and attended his workshops. When I fell in love with public speaking, I admired Dhananjay Hettiarachchi, who is the world champion of speaking. I have seen his videos more than 1OO times. So, for me, a mentor is person who has achieved what he wants to achieve in life. Teachers, parents can guide and advise you but, sometimes cannot mentor you. Mentor is a person who has travelled the path which you wish to travel. There is a difference between a ticket agent and a traveler. Ticket agent can give you ticket to reach your destination, but travelers in reality have to travel. So for me whatever goals you have in your life find such great personalities to learn from them. The biggest use of social media is not using it. If you have achieved something in your life or any realization, use social media to share that learning.

What message would you like to give to this generation? You often talk about trusting people.How do you find it so easy to trust people? Don’t you ever fear of getting betrayed ?

Trust is a habit. I play games of trust by visiting people all around and trusting them. I trust them, but if you don't develop that habit it's very difficult. In whatever sector you are you require opportunities to deliver your skills. Only people can give opportunities to you. If you have more people around you it means you have more opportunities. So, my only message to everyone is we should be liked by people. Liked by people doesn't mean that you have to butter people, but make sure that your personality smooth and your values are so correct that people like being around you. When you are liked by people you are surrounded by more people. And when you are surrounded by more people you will be surrounded by more opportunities in life. You can't say that I don't care what people think because in the end you have to work alongside them. You have to care about people. So, you should groom yourself to have a likeable personality and for this you sometimes have to be out of the box. You have to work hard with great dedication. And once you start realizing these words and apply real meaning of these words then automatically your life will change.

What message would you like to give to this generation

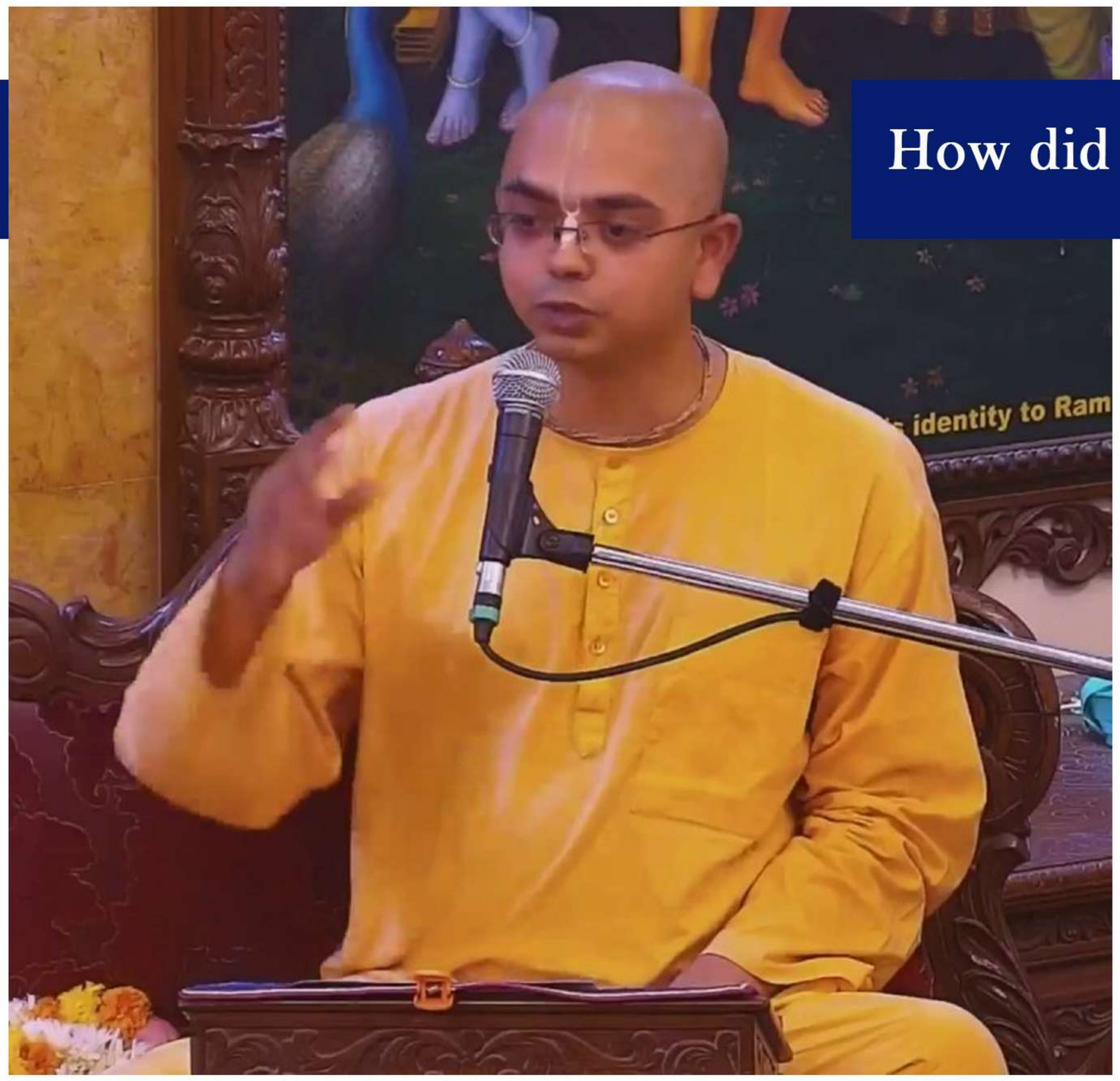
Live in the moment.Don’t think about the past and definitely don’t stress about the future.Focus on what you have now and make the best of it.Keep living in the past and you will never be able to enjoy the future.Stress about the future and you will find your self stranded and regretting for not living your life to the fullest.Indeed the world is s a competitive place,and you need to excel to sustain in it.But you wont do so if you rush into things.Always set small goals in your life, they will one day end up fulfilling your big goals.



CHAITANYA LILA DAS

A life coach &
inspirational speaker.

Chaitanya Lila Das is an IT engineer with a degree from IIT Kharagpur.After *3* years of work in the corporate sector with TCS,he decided to quit his job and serve a larger audience and became a resident monk at ISKCON.He is a TEDx Speaker and a life coach and has been sharing his wisdom with people from the past ten years.During is motivational and inspiring speech at the ETSA Talks, Chaitanya enriched the young minds of the college with the wisdom they need in a very unique style.After his talk, we got theopportunity to ask him a few questions.Read on to find out what he had to say.



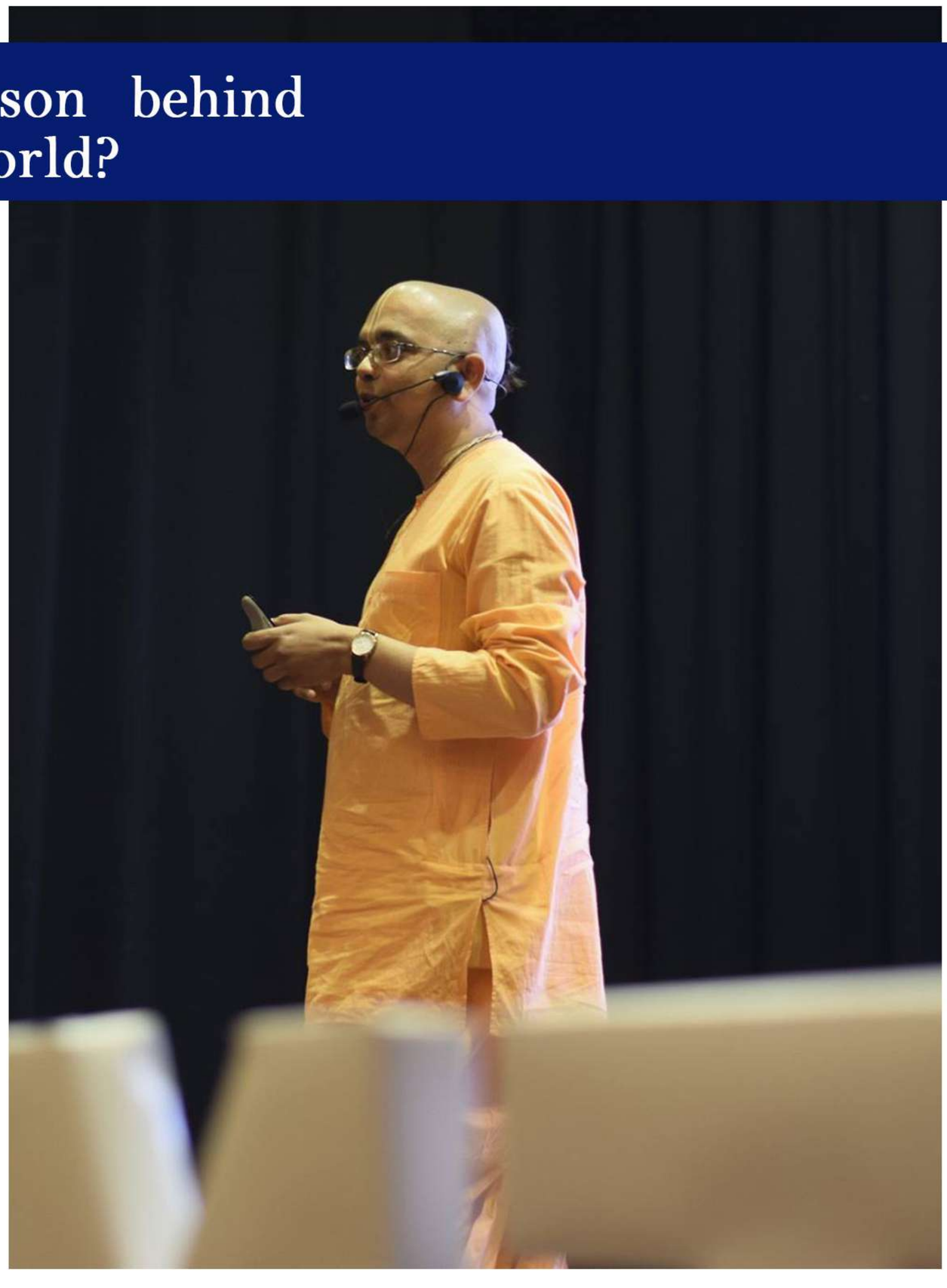
How did you take up spiritual science?

This must be new for you but I've been asked this question several times. The society today needs people from different profession like the doctors, or policeman. People from many professions play an important role in this society. Similarly spirituality is also an important part of the science. I'm not only a person who ran from IIT and TCS . To see the society in a much different manner is the reason why I took Spiritual Science.

Many people think that they will get satisfaction only if they chase fame and money.Is this a right way?

There is no harm in chasing fame or money. But that should be abandoned by understanding correctly the purpose for which you are working hard. Defining as God conscious person doesn't mean that you have nothing to do with fame and money. Its not so that the person who is devoted to God should be like this. I am a spiritual teacher but the understanding of connectivity is open to everyone. Now as students you should be inquisitive about the purpose of your life. It should be like ,I am leading a comfortable life but also understanding the direction, the end result. If we take the example of the bikers simply driving in the nights, they don't know for sure where are they heading to. They just want to enjoy but its not intelligence! Sign of an intelligent student is that if he knows that the final exam is there he prepares for the exam , he gets hold of the textbooks, he practices all kinds of test papers required and is how he turns out to be successful. Similarly, to successfully lead in life we need to understand what this whole game is all about.

Why do you thing is the reason behind illogical rituals throughout the world?



Modern science has been researching so hard to understand about the entire creation.There is no any information about the moon after Neil Armstrongs landing. Nothing is gone beyond that. If technology was so advanced 50 years back that people landed on moon and clicked their photographs why not anything now in the next 50 years ? People just claim that they are knowing the galaxy ,the milky way, the solar system but there is nothing over and beyond. We not only stopped asking questions but we did not have people who would answer our questions. because we didn't have proper people with the proper answers we didnt take up any practices. It is like constructing a building. If you construct a building you need to have proper foundation first. If you don't have proper foundation your building will be affected even by small climatic changes. Similarly, without the right kind of understanding any such practices just become rituals.

We would like to know bit about your childhood and your story till IIT Bombay.

I joint mes christian school in nursery. Till class 12 I was in this nice convent school.Thereafter I went to Delhi took my engineering and of-course I was very die-heart aspirant of getting into IIT, like any other student of this country . But if you desire to be different the whole society starts being weird to us. They start abolishing streams like arts. There are so much of different options available. My desire of getting into IIT was fulfilled after I competed my graduation so I did I paid for this PG entrance . I got IR8. I won't even forget that day when I went to the internet I put my roll number and entered. It showed a green signal showing congratulations and the box beside showed IR8. My life in IIT has taught me a lot . It is not just getting a higher education or educational institute , the endeavor is required there also .

Who inspired you on this path ?

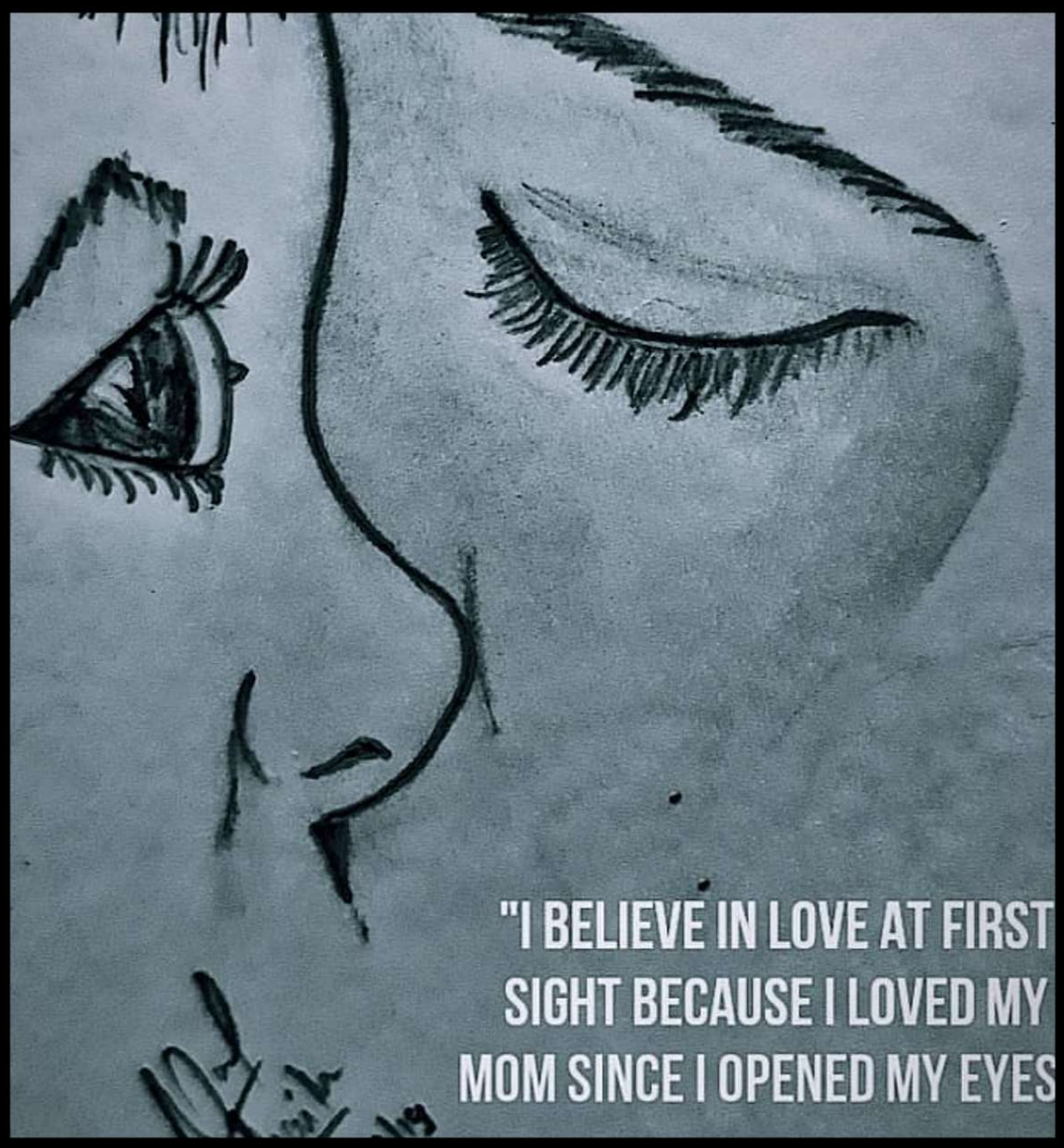
It was Swami Prabhupanda. He was 70 year old man and at the age of 69 he boarded acargo ship and went all the way to America. When he was young he was instructed by his spiritual master that corruptly Indians have become disinterested in their own value or their own cultural and spiritual heritage. They are very much eager to accept anything that is western. So he was instructed because when he will show Indians that Americans are accepting their own culture only then will Indian's accept their own culture. So just to follow that instructions he want all the way fighting through all the odds going through sickness, having his few personal belongings.His joruney will always remain a source of motivation for me.

The artist corner

Well who can say no to a beautiful picture? Showcasing the artwork of of local engineer/artist.

NAVED

BINEJAZ


"I BELIEVE IN LOVE AT FIRST
SIGHT BECAUSE I LOVED MY
MOM SINCE I OPENED MY EYES

ETSA COMMITTEE

2018-2019

ETSA COMMITTEE 2018-2019

ASHISH GUPTA
PRESIDENT

KUNAL KSHIRSAGAR
VICE -PRESIDENT

SANKET MAHAMULKAR
SECRETARY

ANUSHREE DAS
TREASURER

JAYESH KAKKAD
TECHNICAL HEAD

SHUBHAM KHAIRNAR
MAGAZINE HEAD

ETSA COMMITTEE 2018-2019

SHOBNA BANGERA
PUBLICITY HEAD

SHEETAL KADAM
P.R.O

YASIR MULLA
jOINT TECHNICAL HEAD

OMKAR CHAUHAN
VICE PRESIDENT

DISHA SENGAR
JOINT SECRETARY

VISHAL PHALKE
GRAPHICS HEAD

ETSA COMMITTEE 2018-2019

DIKSHITA OSWAL
JOINT TREASURER

MANU KRISHNAN
MEMBERSHIP LIASON

PRIYA SAROJ
jOINT EVENT HEAD

NIVEDITA KALE
JOINT PUBLICITY HEAD

SAURABH MADHVI
BE REPRESENTATIVE

SHIVENDRA SHARMA
SE REPRESENTATIVE

ETSA COMMITTEE 2018-2019

SHRISH SINGH
SE REPRESENTATIVE

JANHAVI KHARMALE
SE REPRESENTATIVE

SAKSHI SALVI
SE REPRESENTATIVE

DIVYA WAIRKAR
SE REPRESENTATIVE

ANMOL SHARMA
SE REPRESENTATIVE

MAHATMA EDUCATION SOCIETY

A TRUSTED NAME IN EDUCATION SINCE 1970

Pillai

INSTITUTIONS CONDUCTED

SCHOOLS

(S.S.C. PROGRAMME)

- **Chembur English Pre-Primary & Primary School** - *Chembur*
- **Chembur English High School** - *Chembur*
- **Chembur Marathi Madhyamik Shala** - *Chembur*
- **Powai Marathi Madhyamik Shala** - *Powai*
- **Mahatma School of Academics and Sports** - *Khanda Colony, New Panvel* (Pre-Primary, Primary & Secondary, English & Marathi Media)
- **HOC International School** - ***Rasayani*** **(English & Marathi Media)**

(CBSE PROGRAMME)

- **Mahatma International School** *Khanda Colony, New Panvel*
- **HOC International School** - *Rasayani*

JUNIOR COLLEGES

- **Chembur English Junior College** - *Chembur*
- **Mahatma Night Junior College** - *Chembur*
- **Mahatma School of Academics & Sports, Junior College of Arts, Science & Commerce** *Khanda Colony, New Panvel*
- **HOC Junior College** - ***Rasayani*** (Junior College of Arts, Commerce, Science with Vocational)

TEACHERS' TRAINING INSTITUTIONS

D.T.Ed. B.Ed. B.P.Ed. M.Ed. Ph.D.

(Approved by National Council for Teacher Education (NCTE) (Affiliated to the University of Mumbai & Recognised by Govt. of Maharashtra.)

- **Mahatma Junior College of Education (D.T.Ed.)-** ***Chembur*** (English & Marathi Media)
- **Pillai College of Education & Research (B.Ed.),** Chembur **Re-Accredited 'A' Grade by NAAC**
- **Pillai College of Education & Research (B.Ed.), Accredited 'A' Grade by NAAC** *Khanda Colony, New Panvel*
- **Pillai HOC College of Education & Research (B. Ed),** ***Rasayani***
- **Vidyadhiraja College of Physical Education & Research (B.P.Ed),** *Khanda Colony, New Panvel*
- **Pillai College of Educatıon & Research (M.Ed.),** Chembur
- **Pillai College of Education & Research (M.Ed.), Accredited 'A' Grade by NAAC** *Khanda Colony, New Panvel*
- **Pillai College of Education & Research (Ph.D Centre),** *Khanda Colony, New Panvel*

INTERNATIONAL SCHOOLS & **INTERNATIONAL JUNIOR COLLEGES**

(CIPP / IGCSE/ICSE/IB SCHOOLS) — **'AS' / 'A' level and 'IB' Programme**

- **Dr. Pillai Global Academy**
- **Gorai**
- **New Panvel**

POLYTECHNIC (3-Year Diploma Programme)

AICTE Approved, Recognized by Govt. of Maharashtra & Affiliated to MSBTE

- **Pillai HOC Polytechnic** - ***Rasayani***

Diploma in Computer Engineering
Diploma in Information Technology
Diploma in Electronics & Tele- communication Engineering
Diploma in Mechanical Engineering
Diploma in Civil Engineering

DEGREE COLLEGES

Bachelor and Master

(Affiliated to the University of Mumbai & Recognised by Govt. of Maharashtra.)

- **Mahatma Night Degree College of Arts & Commerce-** Chembur
- **Pillai College of Arts, Commerce & Science -** New Panvel **Re-Accredited 'A' Grade by NAAC**

B.Com.
B.Com. (Accounting & Finance)
B.Com. (Financial Markets)
B.M.S.
B.M.M.
B. Sc. (I. T.)
B. Sc. (Computer Science)
B.Sc. (Biotechnology)
M.Sc. (I.T.)
M.Sc. (Biotechnology)
M.Com.(Business Management)
M.Com. (Accounting & Finance)

- **Pillai HOC College of Arts, Science & Commerce -** ***Rasayani***

B.Com.
B.M.S.
B.Sc. (I.T.)
B.Sc. (Computer Science)
B. Com. (Accounting & Finance)
B.M.M.
B.Sc. (Maths, Chemistry, Biology & Physics)
B.A. (English Ancillary, History & Economics)

ARCHITECTURE

Bachelor and Master

(Approved by the Council of Architecture and AICTE) (Affiliated to the University of Mumbai & Recognised by Govt. of Maharashtra.)

- **Pillai College of Architecture -** New Panvel
- **Pillai HOC College of Architecture-** Rasayani (B.Arch. 5-year degree course)

***M.ARCH.* (Urban Design)**

- **Pillai College of Architecture -** New Panvel

MANAGEMENT COURSE

MMS

(Approved by AICTE) (Affiliated to the University of Mumbai & Recognised by Govt. of Maharashtra.)
NBA Accredited
'A' Grade by DTE, Govt. of Maharashtra

- **Pillai Institute Of Management Studies & Research -** ***New Panvel*** (MMS: 2-year Post-Graduate Course) **Executive MBA**
- **Pillai HOC Institute Of Management Studies & Research -** ***Rasayani*** (MMS: 2-year Post-Graduate Course)

ENGINEERING COURSE

Bachelor, Master & PhD

(Approved by AICTE) (Affiliated to the University of Mumbai & Recognised by Govt. of Maharashtra.)
NBA Accredited

- **Pillai College of Engineering- New Panvel**

B. E. in Information Technology
B. E. in Computer Engineering
B. E. in Electronics Engineering
B. E. in Mechanical Engineering
B. E. in Electronics & Tele- communication Engineering
B. E. in Automobile Engineering
M. E. in Information Technology
M. E. in Computer Engineering
M. E. in Electronics Engineering
M. E. in Mechanical Engineering (CAD/CAM, Robotics)
M. E. in Mechanical Engineering (Thermal)

PhD (Technology)

Computer Engineering
Mechanical Engineering

- **Pillai HOC College of Engineering & Technology,** ***Rasayani***

B.E. in Mechanical Engineering
B.E. in Electronics & Telecommunication Engineering
B.E. in Automobile Engineering
B.E. in Information Technology
B.E. in Computer Engineering
B.E. in Civil Engineering
B.E. in Electrical Engineering
B.E. in Computer Engineering (Direct second year)
M.E. in Mechanical Engineering (Machine Design)
M.E. in Electronics & Telecommunication Engineering
M.E. in Computer Engineering
M.E. in IT(Information & Cyber Warfare)
M.E. in Civil Engineering (Construction & Management)
M.E. in Computer Engineering (Computer Network & Information Security)

PhD (Technology)

Civil Engineering
Computer Engineering

PILLAI GROUP OF INSTITUTIONS
48 Institutions • Over 2000 Teachers • Over 30,000 Students

Read EduNation
THE DREAM OF AN INDIA EMPOWERED
Dr. K. M. Vasudevan Pillai
Founder:**Mahatma Education Society**
at www.drvasudevanpillai.com