DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SPECTRUM

TECHNICAL MAGAZINE

2K18-19

March

Volume-9

NEC NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)

Editorial board

MESSAGES

Chairman's message

It gives me great happiness to note that the department of Electronics and Communication Engineering, NEC is bringing out the volume-9 of the department technical magazine, "SPECTRUM". From the first edition, I understand that this magazine is intended to bring out the hidden literary talents in the students and also to inculcate leadership skills among them. The newsletter has served as a platform for the students to share their knowledge and ideas. I expect the contributions to this magazine to be of high standard and quality. I wish all the success for this venture.

Vice Chairman's message

I feel extremely delighted to observe that the department of ECE is coming out with a magazine this year also with the dedicated and committed efforts of the faculty and the students of the Editorial Board. The activity depicts the commitment and involvement of students and their thirst for knowledge.

I congratulate the efforts of the members of the Editorial Board in bringing out the volume-9 of the magazine. It is because of their selfless and untiring efforts that we see the magazine enriched with variety of articles.

Principal's message

The magazine of the department is the reflection of the creativity of the students, involved in multifarious activities. It speaks about their imaginative creativity through the medium of a language given in literary and artistic shape.

I feel gratified to see that the department is doing its best in carrying out the mission of grooming the students as such professionals who are not only competent enough to combat the challenges in their life but also become good human beings with moral excellence and social sensitivity

HOD's message

I feel privileged in presenting the volume-9 of our department association magazine. I would like to place my sincere and heartfelt thanks to all those who have contributed to make this effort a success. My special thanks to the Management, for their guidance which enabled us to bring out this volume.

The magazine has a variety of articles endowed with different subjects contributed by the students of our department and their participation in various activities round the year.

I extend my gratitude to the entire team of the Editorial Board for their constant exertion, revision and support in bringing out the magazine in the present form.

INDEX

AUTONOMOUS CARS

Autonomous cars use a variety of techniques to detect their surroundings, such as radar, laser light, GPS, and computer vision. Advanced control systems interpret sensory information to identify appropriate navigation paths, as well as obstacles and relevant signage. Autonomous cars have control systems that are capable of analyzing sensory data to distinguish between different cars on the road, which is very useful in planning a path to the desired destination. Some demonstrative systems, precursory to autonomous cars, date back to the 1920s and 1930s. The first self-sufficient (and therefore, truly autonomous) cars appeared in the 1980s, with Carnegie Mellon University and ALV projects in 1984 and Mercedes-Benz and Bundeswehr University Munich's Eureka Prometheus Project in 1987. A major milestone was achieved in 1995, with CMU's Nav Lab 5 completing the first autonomous coast-to-coast drive of the United States. Of the 2,849 miles between Pittsburgh, PA and San Diego, CA, 2,797 miles were autonomous (98.2%), completed with an average speed of 63.8 miles per hour (102.3 km/h). Since then, numerous major companies and research organizations have developed working prototype autonomous vehicles.

Among the potential benefits of autonomous cars is a significant reduction in traffic collisions the resulting injuries; and related costs, including a lower need for insurance. Autonomous cars are also predicted to offer major increases in traffic flow; enhanced mobility for children, the elderly' disabled and poor people; the relief of travelers from driving and navigation chores; lower fuel consumption; significantly reduced needs for parking space in cities; a reduction in crime and the facilitation of different business models for mobility as a service, especially those involved in the sharing economy
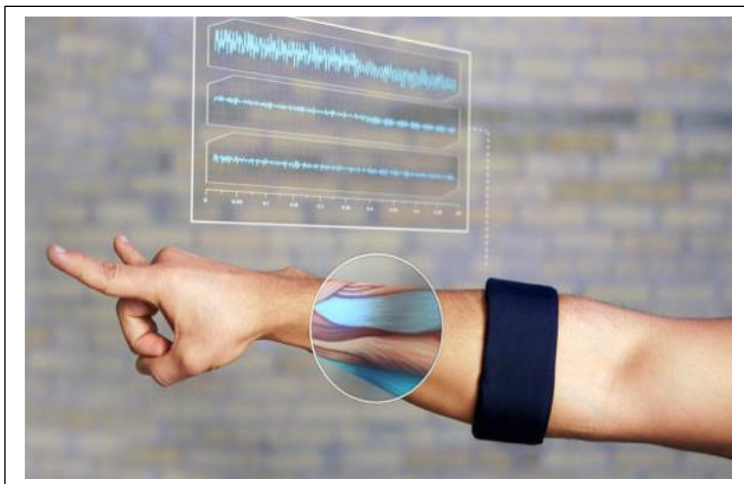

Atchala Mounika,
III Year ECE

MYO-GESTURE CONTROL

This armband is loaded with sensors that can pick up on the electrical activity in your muscles, allowing you to control your electronics wirelessly via Bluetooth. The Myo is sure to be the next generation of gesture control. The device will work with Windows and Mac OS, with iOS and Android support soon to follow. The device is available for a price of $150. If this band is successful, it could mean the end of gesture-recognition. The Myo armband is a $199 gesture control wearable from Thalamic Labs that's all about changing the way we interact with the world. You wear it on your forearm and a series of motion and muscle sensors are able to track movement in a really sophisticated way.

It's been available for people to tinker with for a few years now. But we are only now beginning to see how Myo can really make a difference away from controlling presentation slides and replacing your computer mouse. Myo even has its own Market app store making it easier to bring the gesture controller closer to the things you use every day. Here, we've picked out the more eye grabbing examples of the innovative wearable being put to good use.
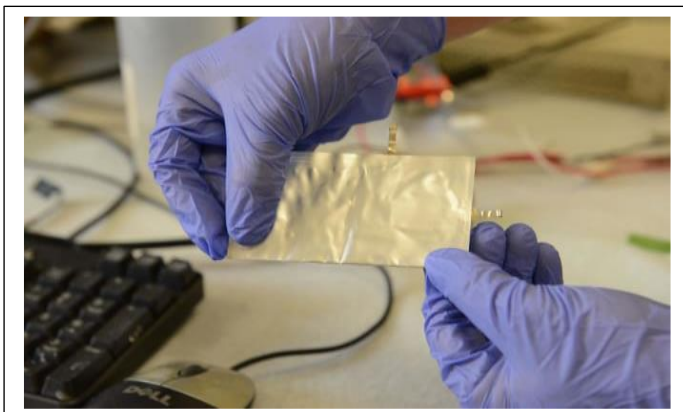

Syed Mahaboob Jani Basha,
II Year ECE

FLEXIBLE, FAST-CHARGING BATTERIES

Next to hyper-fast ground transportation, flexible batteries may seem trivial. But when the batteries that power our gadgets are freed from current technological restrictions, anything might be possible. Here's one example: Scientists published an article about their work on a flexible aluminum-ion battery that looks like a pouch-flask you'd try to sneak into Coachella. But it can charge a phone in one minute, lasts 70 times longer than a traditional smartphone battery, and fits in any kind of gadget you can think of thanks to its malleable shape. Oh, and Elon Musk is working on this problem, too—naturally. Aluminum-ion batteries are a class of rechargeable battery in which aluminum ions provide energy by flowing from the negative electrode of the battery, the anode, to the positive electrode, the cathode. When recharging, aluminum ions return to the anode.

Aluminum-ion batteries are conceptually similar to lithium-ion batteries, but possess an aluminum anode instead of a lithium anode. While the theoretical voltage for aluminum-ion batteries is lower than lithium-ion batteries, 2.65 V and 4 V respectively, the theoretical energy density potential for aluminum-ion batteries is 1060 Wh/kg in comparison to lithium-ion's 406 Wh/kg limit. The large difference in energy density potential is due to the fact that aluminum ions have three valence electrons while lithium ions only have one. Aluminum is also more abundant than lithium, lowering material costs.

Aluminum-ion batteries have a relatively short shelf life. The combination of heat, rate of charge, and cycling can dramatically decrease energy capacity. When metal ion batteries are fully discharged, they can no longer be recharged. Ionic electrolyte materials are expensive. Like most batteries, they have a far lower energy density than gasoline.
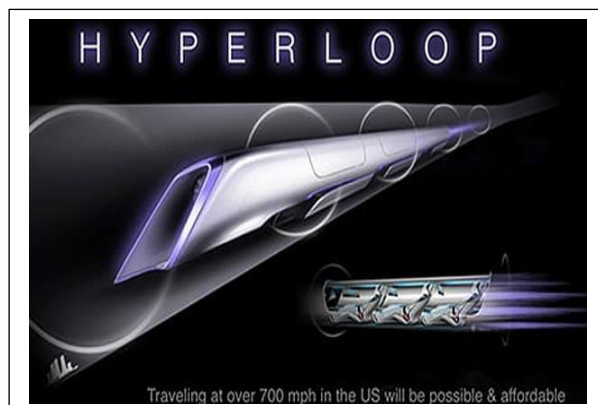

J. Vineeth Kumar,
IV Year ECE

THE HYPER LOOP

Hyper loop is a proposed mode of passenger and freight transportation that would propel a pod-like vehicle through a reduced-pressure tube at more than airline speed. The alpha version of the proposal, published on the SpaceX website, describes design claims of the system, as well as its function. The pods would accelerate to cruising speed gradually using a linear electric motor and glide above their track using passive magnetic levitation or air bearings. The tubes could also go above ground on columns or underground, eliminating the dangers of grade crossings. It is hoped that the system will be highly energy-efficient, quiet and autonomous. The concept of high-speed travel in tubes has been around for decades, but there has been a resurgence in interest in pneumatic tube transportation systems since the concept was reintroduced, using updated technologies, by Elon Musk after 2012, incorporating reduced-pressure tubes in which pressurized capsules ride on an air cushion driven by linear induction motors and air compressors.

The Hyper loop concept has been explicitly open-sourced by Musk and SpaceX, and others have been encouraged to take the ideas and further develop them. To that end, a few companies have been formed, and several interdisciplinary student-led teams are working to advance the technology. SpaceX is building an approximately 1-mile-long (1.6 km) subscale track for its pod design competition at its headquarters in Hawthorne, California. Some experts are sceptical, saying that the proposals ignore the expenses and risks of developing the technology and that the idea is "completely impractical‖. Claims have also been made that the hyper loop is too susceptible to disruption from a power outage or being completely destroyed by a simple terror attack to be considered safe

B. Vishnu Bharadwaj,

III Year ECE

HOLOGRAM BRACELET

A hologram bracelet or energy bracelet is a small rubber wristband fitted with a hologram. Manufacturers have said that the holograms "optimize the natural flow of energy around the body, and so improve an athlete's strength, balance and flexibility‖. Only anecdotal evidence supports these claims and tests performed by the Australian Sceptics, the University of Wales Institute, Cardiff, and the RMIT's School of Health Sciences have been unable to identify any effect on performance.

Hologram bracelets include a small hologram which manufacturers say is "programmed" through an undisclosed process. Power Balance, who has manufactured the bracelets since 2007, says that the programming "mimics Eastern philosophies‖. The holograms are most usually installed in bracelets and wristbands but are also sold as pendants or necklaces, anklets, shoe inserts, pet tags, or separately for users to apply to the back of a watch, for example.

Manufacturers including Power Balance and EFX Performance make no claims on their websites for their products, but carry testimonials from users who say that they improve athletic performance. Until 2010, Power Balance said that their bracelets helped improve an athlete's strength, balance and flexibility because the holograms are embedded with an "electrical frequency" that restores the bodies "electrical balance" on contact with its natural energy field. In December 2010, following a successful legal action by the Australian Competition and Consumer Commission, Power Balance admitted that there was no credible scientific evidence for these claims.

Sk. Srinadh,

III Year ECE

DESKTOP DNA LAB

Genotype refers to the entire set of genes in a cell, organism or an individual. With over 40 trillion cells in the human body, we are the most diverse and difficult terrain to explore. The Juno system is engineered to genotype a meagre DNA sample. To accomplish this, Juno will need to ―amplify‖ DNA by making millions of copies of one strain so it can be compared with many others. The key to this process is Juno's proprietary microchip, which can amplify samples that are 1,000 times smaller than a drop of water.

Normally this process would take a full day but Jeno only takes three hours. The extra hours free scientists to concentrate on actual analysis—a shift that makes it easier to match bone-marrow donors, find cures for genetic diseases and more. Juno is a breakthrough technology that is now being used at academic and research labs. Increase productivity and efficiency with automated, cost-effective, and easy-to-use workflows for targeted DNA next-generation sequencing (NGS) library preparation, gene expression analysis and genotyping by allele-specific PCR.

Using the Juno Targeted DNA Sequencing Library Preparation System, including Targeted DNA Seq Library Preparation reagents, you can produce dozens to hundreds of sample libraries daily, with each sample enriched for up to 4,800 specific amplicons covering user-defined genes or genomic loci. Optimized for use with Illumina sequencing systems in combination with Fluidigm-supplied sample barcodes, Juno enables accurate sequencing of more samples—faster and more affordably than ever before. Juno integrates IFC control and thermal cycling to enable scalable, automated NGS library preparation for Illumina sequencers and IFC preparation for both gene expression and genotyping analysis using the Fluidigm Biomark HD.

Sk. Reshma,
III Year ECE

GOOGLE CARDBOARD

Google Cardboard is a virtual reality (VR) platform developed by Google for use with a head mount for a smartphone. Named for its fold-out cardboard viewer, the platform is intended as a low-cost system to encourage interest and development in VR applications. Users can either build their own viewer from simple, low-cost components using specifications published by Google, or purchase a pre-manufactured one. To use the platform, users run Cardboard-compatible applications on their phone, place the phone into the back of the viewer, and view content through the lenses.

Google Cardboard headsets are built out of simple, low-cost components. The headset specifications were designed by Google, which made the list of parts, schematics, and assembly instructions freely available on their website, allowing people to assemble Cardboard themselves from readily available parts. Pre-manufactured viewers were only available from third-party vendors until February 2016, when Google began selling their own through the Google Store. The parts that make up a Cardboard viewer are a piece of cardboard cut into a precise shape, 45 mm focal length lenses, magnets or capacitive tape, a hook and loop fastener (such as Velcro), a rubber band, and an optional near field communication (NFC) tag. Once the kit is assembled, a smartphone is inserted in the back of the device and held in place by the selected fastening device. A Google Cardboard–compatible app splits the smartphone display image into two, one for each eye, while also applying barrel distortion to each image to counter pincushion distortion from the lenses. The result is a stereoscopic ("3D") image with a wide field of view. The first version of Cardboard could fit phones with screens up to 5.7 inches (140 mm) and used magnets as input buttons, which required a compass sensor in the phone. An updated design released at Google I/O 2015 works with phones up to 6 inches (150 mm) and replaces the magnet switch with a conductive lever that triggers a touch event on the phone's screen for better compatibility across devices.

K. Manju Bhargavi,
II Year ECE

TRANSPARENT SMARTPHONES

Inventors, Jung Won Seo, Jae-Woo Park, Keong Su Lim, Ji-HwanYang and Sang Jung Kang, who are scientists at the Korean Advanced Institute of Science and Technology, have created the world's first transparent computer chip. The chip, known as (TRRAM) or transparent resistive random-access memory, is similar to existing chips known as (CMOS) or metal oxide semiconductor memory, which we use in new electronics. The difference is that TRRAM is completely clear and transparent. What is the benefit of having transparency? "It is a new milestone of transparent electronic systems," says Jung Won Seo. "By integrating TRRAM with other transparent electronic components, we can create total see through embedded electronic systems." The technology could enable the windows or mirrors in your home to be used as computer monitors and television screens. This technology is expected to be available within 3 to 4 years.

R. Anusha,
IV Year ECE

TENSOR PROCESSING UNIT

The Tensor processing Unit (is Google's custom tool to accelerate machine learning workloads using the Tensor Flow framework In 2017 Google announced a Tensor processing Unit (a custom application specific integrated circuit (built specifically for machine learning A year later, TPUs were moved to the cloud and made open for commercial use Following the line of CPUs and GPUs, Tensor Processing Units (are Google's custom developed application specific integrated circuits (that are supposed to accelerate machine learning workloads They are designed specifically for Google's Tensor Flow framework, a symbolic math library that is used for neural networks Tensor Flow is known to be not an easy nut to crack To ensure a better understanding of the concept of a tensor, the TPU structure, and how it works, we'll try to give a brief and simple overview of the technology

Logic behind TPU

Quantization in line with the quantization technique, the process of approximation of an arbitrary value between a preset minimum and a maximum value with an 8-bit integer, TPUs contain 65 536 8-bit integer multipliers. In essence, this technique is compression of floating-point calculations with 32 bit or even 16-bit numbers to 8 it integers. Quantization is the first powerful tool TPUs use to reduce the cost of neural network predictions without significant losses in accuracy. Secondly, the TPU design itself encapsulates the essence of neural network calculation. A TPU includes the following computational resources Matrix Multiplier Unit (65 536 8 bit multiply and add units for matrix operations Unified Buffer (24 MB of SRAM that work as registers Activation Unit (Hardwired activation functions. They are controlled with a dozen high level instructions that focus on the major mathematical operations required for neural network inference A special compiler and software stack translate API calls from Tensor Flow graphs into TPU instructions. Thirdly, Parallel Processing is typical RISC processors provide instructions for simple calculations such as multiplying by processing a single, or scalar, operation with each instruction. As you remember, a TPU contains a Matrix Multiplier Unit. Advantages of TPU Using TPUs offers a number of advantages in terms of increasing efficiency and speed of computation, including the following benefits Accelerated performance of linear algebra computation, which is used heavily in machine learning applications Minimized time to accuracy when training large, complex neural network models that previously took weeks to train can converge in hours on TPUs Scalable operations across different machines with their TPU servers.

Dr. V. Venkata Rao
Professor & HOD
ECE Dept.,

GLOBAL MAGNETIC SENSOR MARKET

Global Magnetic Sensor Market is Driven by Internet of Things IoT in Various Industrial Applications, Smart Products and Advancements in the Automotive Industry What is A Magnetic Sensor? A magnetic sensor is a small-scale micro electrochemical system (MEMS) device for detecting and measuring magnetic field. This sensor acts as a transducer which varies its output voltage in reaction to a magnetic field. Sensor these type of sensors are proximity switching, speed detection, positioning and current sensing applications. Moreover, these sensors also detect changes and disturbances in a magnetic field like flux, strength and direction. Future Market Insights (FMI) 'Magnetic Sensor Market Global Industry Analysis 2013-2017 and forecast 2018-2028 report. The global magnetic sensor market is expected to expand at a CAGR of 4 8 during the forecast period. This growth is envisioned due to an increase in the demand for magnetic sensors for multiple applications in automotive IoT.

This report includes magnetic sensors which are based on Hall Effect, AMR (Anisotropic Magneto Resistive),GMR (Giant Magneto Resistance), And TMR (Tunnel Magneto Resistance)technologies The global magnetic sensor market is categorized by technology ,application and region By technology, the market is segmented as Hall effect, AMR (anisotropic magneto resistance), and TMR (tunnel magneto resistance) On the basis of application the global magnetic sensor market is segmented by industrial automotive consumer electronics and others
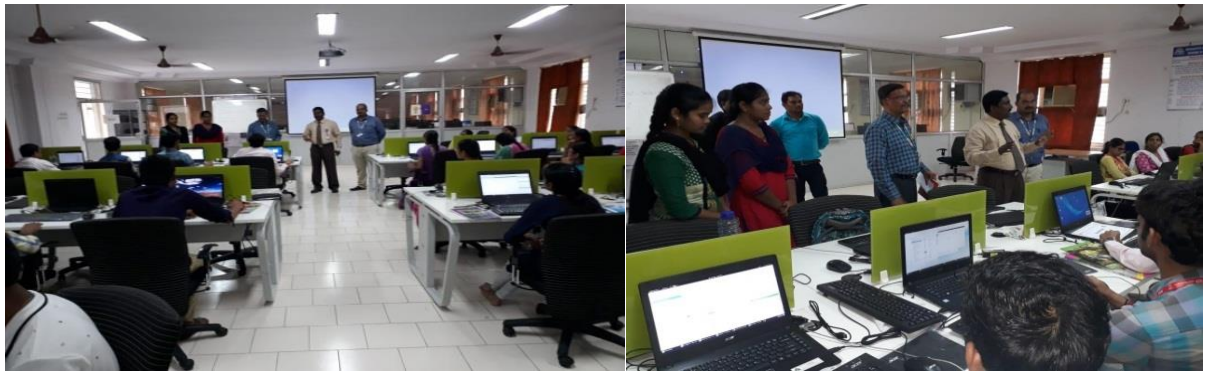
J. V. K. Ratnam
Professor
ECE Dept.,

WORKSHOP DETAILS

S.NO	Dept	Name of the Training Programme/Seminar/ Workshop/Conference	Name of the Resource Person and Organization	Name of the Coordinator	Date/s of the event	No. of Participants
1	E.C.E	A Two Day Workshop on Python for Beginners	Mr. T. V. Rao,Advisor, NEC College	Dr.V.VenkataRao, Professor & Head of ECE	13/03/2019 & 14/03/2019	30
2	E.C.E	A One Day Workshop on Scilab	Dr. Kannan Moudgalya, Professor, IIT Bombay	Mr. V. Rama Krishna Reddy, Assistant Professor, ECE dept	04/03/2019	83
3	E.C.E	A One Day Workshop on Virtual Labs-an MHRD-NMEICT Initiative	Ms. Parnika Srivatsava and Ms. Krishna Teja Chepur, IIIT Virtual Lab team, Hyderabad.	Dr.V.VenkataRao, Professor & Head of ECE	05/03/2019	65
4	E.C.E	A Short Term Course on Recent Trends in Biomedical Instrumentation	NITTTR-Chandigarh	Dr. A.V. Nageswararao, Associate Professor, ECE Dept	25/03/2019 to 29/03/2019	50
5	E.C.E	Awareness Program on Higher Education	Mr. N. Ravi Kumar, Manager, Conduira andMs.Thania Bajaj, Executive Manager of Education & Training Services, Guntur.	Dr.V.VenkataRao, Professor & Head of ECE	**19/03/2019**	88
6	E.C.E	A Two Day Workshop on Important Topics in Digital Signal Processing	Mr. S. V. Sai Krishna, JNTUN, Narasaraopet	Dr.V.VenkataRao, Professor & Head of ECE	14/03/2019 and 15/03/2019	147
7	E.C.E	Two Day Workshop on Important Topics in EM Waves and Transmission lines	Mr. D. MohanaMurali, IIT, Tirupathi.	Dr.V.VenkataRao, Professor & Head of ECE	11/03/2019 and 12/03/2019	235
8	E.C.E	A Short Term Course on Wireless Propagation	NITTTR-Chandigarh	Dr. A. V. Nageswararao, Associate Professor, ECE Dept	25/02/2019 to 01/03/2019	50
9	E.C.E	A Guest lecture on Advanced Wireless Communications	Dr. P.BalaMurali Krishna, Professor & HOD, Department of ECE, Sri MittapalliCollege of Engineering, Guntur.	Dr. Sreenivasa Ravi, Professor, ECE Dept	16/02/2019	75
10	E.C.E	A Guest lecture on Global Navigation Satellite System	Dr. D. J. R. Kiran Kumar, Associate Professor, Dept of	Dr. A. V. Nageswararao, Associate	2/2/2019	160

			ECE, KLEF, Vaddeswaram	Professor, ECE Dept		
11	E.C.E	A Short Term Training on Applications of IoT	Mr. P. SrinivasRao,Mr. Y. Naga Ravi, Technical Directors and Mr. Ch. Narender, App Developer, Chinmaya Technologies, Hyderabad.	Dr.V.VenkataRao, Professor & Head of ECE	06/02/2019 to 27/02/2019	210
12	E.C.E	Awareness Program on Higher Education	Mr.Shiva Krishna, Videsh Consultancy, Vijayawada	Dr.V.VenkataRao, Professor & Head of ECE	19/2/2019	55
13	E.C.E	A Short Term Course on Digital System Design	NITTTR-Chandigarh	Mr. J.V.K. Ratnam, Professor, ECE Dept	28/01/2019 to 01/02/2019	51
14	E.C.E	Workshop on Mathematical Operations with SciLab	Ms. G.Alekhya and Ms. Mubeena, APSSDC trainers	Dr. P Lakshmanan Professor & Head of EEE	10/1/2019 to 12/1/2019	33
15	E.C.E	Awareness Program on Abroad Education	Mr. K. SeshuBabu, Process Manager, Center for International Admissions and Visas, Guntur.	Dr.V.VenkataRao, Professor & Head of ECE	8/1/2019	160
16	E.C.E	Awareness Program on Overseas Education	Mr. U. Venkateswara reddy, Worldwide Edu Consultants, Guntur	Dr.V.VenkataRao, Professor & Head of ECE	5/1/2019	175
17	E.C.E	A Program on Guidance and tips to crack GATE for GATE-2019 Aspirants	Mr. S. Arun Kumar, IIT, Tirupathi	Dr.V.VenkataRao, Professor & Head of ECE	14/12/2018	30
18	E.C.E	Seminar on Higher Education	Mr. K.H.Vasudev, Regional Head, Telangana, Manya Education Pvt.Ltd., Hyderabad	Dr.V.VenkataRao, Professor & Head of ECE	08/12/2018	60
19	E.C.E	A five day Faculty Development Program on Recent Trends and Applications in Biomedical Signal and Image Processing	Dr. H. Prasanna Kumar, Assistant Professor, Department of EEE, University of Visveswaraya College of Engineering, Bengaluru & Dr. K. Naga Srinivasarao Batta, Asst. Professor, Department of ECE, NIT, Warangal.	Dr.V.VenkataRao, Professor & Head of ECE	26/11/2018 to 30/11/2018	83
20	E.C.E	Interaction session students with German delegates	Dr. Till Claudflieg and Dr. ChristophGreb, Applied Robot Control Labs, Germany.	Dr.V.VenkataRao, Professor & Head of ECE	03/11/2018	30

21	E.C.E	Awareness Programme on Industry Expectations and Technical Trends	Mr. Richard King, Regional Head, TCS, Hyderabad	Dr.V.VenkataRao, Professor & Head of ECE	03/11/2018	120
22	E.C.E	A Program on Vigilance Awareness Week - 2018 Eradicate Corruption - Build a New India	Mr. SankarPinarayi, General Manager, Power Grid Corporation, Chilakaluripet	Dr.V.VenkataRao, Professor & Head of ECE	31/10/2018	165
23	E.C.E	Personality Development Programme	Dr. YendamuriVeerendra nath, Personality Development Trainer, Hyderabad.	Dr.V.VenkataRao, Professor & Head of ECE	28/09/2018	210
24	E.C.E	Seminar on GPS Navigational Systems	Dr. D. VenkataRatanam, Professor, Dept of ECE, Head, Centre for Atmospheric Sciences, KL University, Vaddeswaram, Guntur.	Dr. Sreenivasa Ravi, Professor, ECE Dept.	15/09/2018	73
25	E.C.E	A One Day Seminar on Data Science	Mr. Sk. Pramod, Data Scientist & Project Manager for ThoughtWorks, President of Swecha and Secretary of Free Software movement of India	Dr.V.VenkataRao, Professor & Head of ECE	15/09/2018	60
26	E.C.E	Seminar on Applications of DSP & VLSI in Broadcasting	Mr. P. Kalee Prasad, Senior Engineer, Doordarshan, Machilipatnam	Dr. A. V. Nageswararao, Associate Professor, ECE Dept.	05/09/2018	89
27	E.C.E	Awareness Program on Abroad education in U. S. A	Mr. Ravi Annavarapu, Jounalist, USA	Dr.V.VenkataRao, Professor & Head of ECE	24/08/2018	120
28	E.C.E	A Workshop on Scilab	Ms. V. Sireesha and Ms. D.Gireesha, APSSDC Trainers	Dr.V.VenkataRao, Professor & Head of ECE	23/08/18 to 25/08/2018	37
29	E.C.E	AWorkshop on Embedded Systems	Mr. B. Naga Raju, Mr. D. Fayazuddinand Mr. S. Sravan Kumar, APSSDC Trainers.	Dr.V.VenkataRao, Professor & Head of ECE	16/07/18 to 18/07/2018 and 19/07/18 to 21/07/2018	81
30	E.C.E	Interactive session on Career Opportunities for ECE students	Dr. E. Muneender, Founder & Honorary Advisor, Viswa Academy, Hyderabad.	Dr.V.VenkataRao, Professor & Head of ECE	11/07/2018	160

A One Day Workshop on Scilab conducted on 04/03/2019

A Program on Vigilance Awareness Week - 2018 Eradicate Corruption - Build a New India conducted on 31/10/2018

Personality Development Programme conducted on 28/09/2018

Seminar on GPS Navigational Systems conducted on 15/09/2018

A One Day Seminar on Data Science conducted on 15/09/2018

Seminar on Applications of DSP & VLSI in Broadcasting conducted on 05/09/2018

STUDENT TOPPERS

I B.TECH. II SEMESTER, ECE Toppers List (2018 Batch)

II B.TECH. II SEMESTER, ECE Toppers List (2017 Batch)

III B.TECH. II SEMESTER, ECE Toppers List (2016 Batch)

IV B.TECH. II SEMESTER, ECE Toppers List (2015 Batch)

I-B.Tech, I-Semester ECE Toppers list (2018 batch)   II-B.Tech, I-Semester ECE Toppers list (2017 batch)

III-B.Tech, I-Semester ECE Toppers list (2016 batch)

IV-B.Tech, I-Semester ECE Toppers list (2015 batch)

S. No.	H.T. No.	Name of the Candidate	Marks Obtained
1	15471A0402	BANDI BANU KALYANI	614
2	15471A04E1	ANNAPUREDDY KOMALI	606
3	15471A0477	TAMMINENI HARIVARDHAN REDDY	603
4	15471A04I9	THADIKAMMALA AJAYNARAYANA	595
5	15471A04D7	TALLURI LAVANYA	594
6	16475A0401	GUDLURI LAVANYA	593
7	15471A04I5	NAKKALA VAMSI KRISHNA	582
8	15471A0486	SETTY SAI SARATH	580
9	15471A04H5	DURGI VENKATA BHARGHAV NARAYANA	579
10	15471A0476	KANNEGANTI DIVYA	578

NPTEL CERTIFICATION DETAILS

S.No	Name of the Staff Member	Registered Online Course	Type of Certificate
1	Mr.J V K Ratnam	Deep Learning	ELITE
2	Dr A V Nageswara Rao	Computer Architecture	ELITE
3	Dr.V.VENKATA RAO	Microprocessors & Microcontrollers	ELITE + SILVER
4	P.S.S.CHAKRAVARTHY	Microprocessors & Microcontrollers	ELITE
5	JUPALLI NARASIMHA RAO	Microprocessors & Microcontrollers	ELITE + SILVER
6	V.RAMA KRISHNA REDDY	Microprocessors & Microcontrollers	ELITE + SILVER
7	CH.SURESH BABU	Microprocessors & Microcontrollers	Successfully Completed
8	ANNEPAKA RAVEENDRA BABU	Microprocessors & Microcontrollers	ELITE
9	A.V.NAGESWA RA RAO	Embedded Systems using ARM	ELITE
10	B.SUNEETHA	Digital Electronics	Successfully Completed
11	ZUBER BASHA SHAIK	Industry 4.0 IOT	ELITE + SILVER
12	G.SAI GANESH	Industry 4.0 IOT	ELITE
13	N.RAJIV REDDY	Biomedical Image processing	Successfully Completed

MOUs

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** (hereinafter called as the 'MOU') is entered into on this the 01-02-2019.

BETWEEN

Narasaraopeta Engineering College, Kotappakonda Road, Yellamanda P.O, Narasaraopet – 522601, Guntur (Dist) represented herein by its **Dr.M.Sreenivasa Kumar** (hereinafter referred as **"First Party"**, the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

Efftronics Systems Pvt. Ltd., *40-15-9,Brundavan Colony, VIJAYAWADA – 520 010., Andhra Pradesh, INDIA.* and represented herein by its **CEO, Mr.D.Rama Krishna,** (hereinafter referred to as **"Second Party"**, company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party')

AGREED:

For **Narasaraopeta Engineering College**   For **Efftronics Systems Pvt. Ltd.**

PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522601
Guntur (Dist.) A.P.

Authorized Signatory   Authorized Signatory

Narasaraopeta Engineering College	Efftronics Systems Pvt. Ltd.
Kotappakonda Road, Yellamand P.O, Narasaraopet – 522601, Guntur (Dist)	Efftronics Systems Pvt. Ltd., 40-15-9, Brundavan Colony VIJAYAWADA – 520 010. Andhra Pradesh, INDIA.
Cell no: 9440757039	Cell no: 91-866-2466675
E-mail: principal@nrtec.ac.in	E-mails: : hr@efftronics.com
Web: nrtec.ac.in	Web: www.efftronics.com

Witness1   Witness2
(Dr. V. VENKATA RAO)   (Dr. P. LAKSHMANAN)

Witness3   Witness4
(D. Spurthi)   (G RENUKA MADHURI)

MEMORANDUM OF UNDERSTANDING(MOU)

BETWEEN

NARASARAOPETA ENGINEERING COLLEGE

&

SAILOTECH Private Limited

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** (hereinafter called as the 'MOU') is entered into on this the 4th day of – January – Two Thousand Nineteen (04/01/2019),

BETWEEN

NARASARAOPETA ENGINEERING COLLEGE, Yellamanda(post), Kottappakonda Road, Narasaraopet-522601,Guntur (DT),A.P. , the First Party represented herein by its **Dr.M.Sreenivasa Kumar** (hereinafter referred as '**First Party**', the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

SAILOTECH Private Limited, 2nd Floor, Cyberville, Near Image Hospital, Vittal Rao Nagar, Madhapur, Hyderabad, Telangana 500081,the Second Party, and represented herein by Head-Human Resoure,, **Sri Joshnu Tippanna**, (hereinafter referred to as "**Second Party**", company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party')
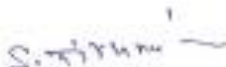
AGREED:

For **Narasaraopeta Engineering College**   For **Sailotech Private Limited**

Authorized Signatory   Authorized Signatory

PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET - 522 601
Guntur (Dist.), A.P.

Narasaraopeta Engineering College	Sailotech Private Limited
Kottappakonda Road, Yellamanda(Post), Narasaraopet-522601 Guntur (Dist)	2nd Floor, Cyberville, Near Image Hospital, Vittal Rao Nagar, Madhapur, Hyderabad, Telangana 500081
Cell:9440757039	Cell:7702306664
principal@nrtec.ac.in	Joshua.tippanna@sailotech.com
www.nrtec.ac.in	www.sailotech.com

Witness1   Witness 3

Witness 2   Witness 4

7

MEMORANDUM OF UNDERSTANDING(MOU)

BETWEEN

NARASARAOPETA ENGINEERING COLLEGE

&

SKYBRIDGE SOLUTIONS PVT. LTD

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** (hereinafter called as the 'MOU') is entered into on this the 01-02-2019.

BETWEEN

NarasaraopetaEngineering College, Kotappakonda Road, Yellamanda P.O, Narasaraopet – 522601, Guntur (Dist) represented herein by its Dr.M.Sreenivasa Kumar(hereinafter referred as **"First Party"**, the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

SkyBridge Solutions Pvt. Ltd.,1-55/4/RP/LG/W2, Rajaprasadamu Building, Maszid Banda Road, SaiPruthvi Enclave, Kondapur, Hyderabad, PIN-500084. and represented herein by its Zonal / Divisional Head, **Mr. KattaSitaram,** (hereinafter referred to as **"Second Party"**,company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators andassigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party')

AGREED:

For **NarasaraopetaEngineering College**   For**SkyBridge Solutions Pvt. Ltd.**

PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
Authorized Signatory 522 601
Guntur (Dist.), A.P.

AuthorizedSignatory

NarasaraopetaEngineering College	SkyBridge Solutions Pvt. Ltd.
Kotappakonda Road, Yellamand P.O, Narasaraopet – 522601, Guntur (Dist)	1-55/4/RP/LG/W2, Rajaprasadamu Building, Maszid Banda Road, SaiPruthvi Enclave, Kondapur, Hyderabad, PIN-500084
Cell no: 9440757039	Cell no: 4039213811
E-mail: principal@nrtec.ac.in	E-mails: ram5021@yahoo.com
Web: nrtec.ac.in	Web: https://skybridgeglobal.com/

Witness1

Witness2

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

NARASARAOPETA ENGINEERING COLLEGE

&

MITTAPALLI SPINNERS LIMITED

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** (hereinafter called as the 'MOU') is entered into on this the 01-02-2019.

BETWEEN

Narasaraopeta Engineering College, Kotappakonda Road, Yellamanda P.O, Narasaraopet – 522601, Guntur (Dist) represented herein by its **Dr.M.Sreenivasa Kumar** (hereinafter referred as **"First Party"**, the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

Mittapalli Spinners Limited, CHINATURAKAPALEM (V),NARASRAOPET(M), GUNTUR(DT),PIN-522601,and represented herein by its Zonal / Divisional Head, **Mr. G.SHASIDHAR** , (hereinafter referred to as **"Second Party"**,company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

[First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party']

AGREED:

For **Narasaraopeta Engineering College**   For **Mittapalli Spinners Limited**

For MITTAPALLI SPINNERS LIMITED

(G. Shashidhar)
General Manager

PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
Authorized Signatory
NARASARAOPET - 522 601
Guntur (Dist.), A.P

Authorized Signatory

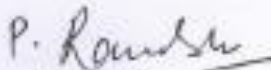| Narasaraopeta Engineering College	Mittapalli Spinners Limited
Kotappakonda Road, Yellamand P.O, Narasaraopet – 522601, Guntur (Dist)	Mittapalli Spinners Limited, Chinaturakapalem(V),Narasaraopet(M), Guntur(DT),Andhra Pradesh ,PIN- 522601
Cell no: 9441895535	Cell no: 9581442701
E-mail: mechhod@nrtec.ac.in	E-mails: mittapallispinners@gmail.com.com
Web: nrtec.ac.in	Web: www.mittapallispinners.com

Witness1

(Dr. D.Suneel)

Witness2

(Dr.P.Lakshmanan)

Witness3

Witness4

MEMORANDUM OF
UNDERSTANDING (MOU)

BETWEEN

NARASARAOPETA ENGINEERING COLLEGE

&

Inovies Consulting Pvt Ltd

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** (hereinafter called as the 'MOU') is entered into on this the 01-02-2019.

BETWEEN

Narasaraopeta Engineering College, Kotappakonda Road, Yellamanda P.O, Narasaraopet – 522601, Guntur (Dist) represented herein by its **Dr. M.Sreenivasa Kumar** (hereinafter referred as **"First Party"**, the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

Inovies Consulting Pvt Ltd, #501, Level 5, Plot No:57/99 & 50/109, Survey No: 78, Patrika Nagar, Madhapur, Hyderabad, Telangana 500081(Each and represented herein by its CTO, Mr.Nagendra Bommasani, (hereinafter referred to as **"Second Party"**,company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party')

AGREED:

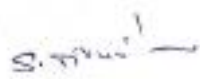For **Narasaraopeta Engineering College**   For **Inovies Consulting Pvt Ltd**

PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
Narasaraopet – 522 601
Guntur (Dist.), A.P.

Authorized Signatory

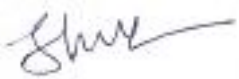| Narasaraopeta Engineering College	Inovies Consulting Pvt Ltd
Kotappakonda Road, Yellamand P.O, Narasaraopet – 522601, Guntur (Dist)	Inovies Consulting Pvt Ltd, #501, Level 5, Plot No:57/99 & 50/109, Survey No: 78, Patrika Nagar, Madhapur, Hyderabad, Telangana 500081
Cell no: 9440757039	Cell no: 9908334546
E-mail: csehod@nrtec.ac.in	E-mails: bommasani.nagendra@inovies.com
Web: nrtec.ac.in	Web: www.inovies.com

Witness1

(Dr. S.N.Thirumala Rao)

Witness2

(Dr.P.Lakshmanan)

Witness3

(Shaheen MA)

Witness4

(K Rajendra Prasad)

MEMORANDUM OF UNDERSTANDING (MOU)

BETWEEN

NARASARAOPETA ENGINEERING COLLEGE

&

HEBEON Technologies

MEMORANDUM OF UNDERSTANDING

This **Memorandum of Understanding** (hereinafter called as the 'MOU') is entered into on this the 01-02-2019.

BETWEEN

Narasaraopeta Engineering College, Kotappakonda Road, Yellamanda P.O, Narasaraopet – 522601, Guntur (Dist) represented herein by its **Dr. M.Sreenivasa Kumar** (hereinafter referred as **"First Party"**, the institution which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

AND

HEBEON Technologies, located at 5 th Floor, 501, Supriya Estates, Prashanth Hills, Gachibowli. Hyderabad, Telangana – 500032.(Each and represented herein by its Zonal / Divisional Head, Mr.Shankar Raju, (hereinafter referred to as "**Second Party**",company which expression, unless excluded by or repugnant to the subject or context shall include its successors – in-office, administrators and assigns).

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party')

AGREED:

For **Narasaraopeta Engineering College**   For **HEBEON Technologies**
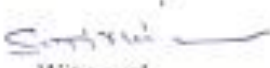
PRINCIPAL
NARASARAOPETA ENGINEERING COLLEGE
(AUTONOMOUS)
NARASARAOPET – 522 601
Guntur (Dist.), A.P.

Authorized Signatory

Narasaraopeta Engineering College	HEBEON Technologies
Kotappakonda Road, Yellamand P.O, Narasaraopet – 522601, Guntur (Dist)	HEBEON Technologies, located at 5 th Floor, 501, Supriya Estates, Prashanth Hills, Gachibowli. Hyderabad, Telangana – 500032
Cell no: 9440757039	Cell no: 9502344400
E-mail: principal@nrtec.ac.in	E-mails: csraju@hebeon.com
Web: nrtec.ac.in	Web: www.hebeon.com

Witness1   Witness2

(Dr. S.N.Thirumala Rao)   (Dr.P.Lakshmanan)

Witness3 –   Witness4
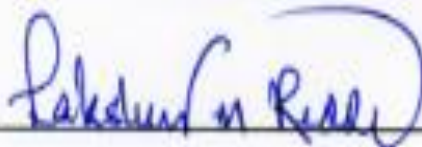
GENERAL COLLABORATIVE AGREEMENT
between
New Mexico State University
and
Narasaraopet Engineering College

WITH THIS COLLABORATIVE AGREEMENT (herein referred to as Agreement), effective upon signing, the Regents of New Mexico State University (herein referred to as NMSU) and Narasaraopet Engineering College (herein referred to as NEC), sharing common goals of education and research, desire to collaborate between academic units in both universities through international and cultural exchange opportunities,

IN WITNESS WHEREOF, the parties hereto execute this Agreement as follows:

The Regents of New Mexico State University

By: _____

Name: Lakshmi N. Reddi

Title: Dean, NMSU College of Engineering

Date: Nov 1, 2018

Narasaraopet Engineering College

By: _____

Name: chakravarthi Mittapalli

Title: Vice-chairman

Date: NOV, 1 2018