The Editorial Board

–Beckoning Creati'wit'y

INSIDE THIS ISSUE:

OCTOBER 2018   VOLUME 10. ISSUE 3

TIRESIA

Augmenting Cognizance

TETE-A-TETE

WITH

Dr. ARISTIDES KIPRAKIS

RESEARCH EXPLORER, UNIVERSITY OF EDINBURGH, UK.

Message from The Editorial Board

"Man cannot discover new oceans unless he has the courage to lose the sight of the shore."

~Andre Gida

Faculty Advisor

Dr. S.N. Singh

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With each realm of change, people get enticed into a new streak of life. God justifies this magically in different connotations. Variegated and faded drab, monotonous and spiritually inspired, creative and irreparable, etc. are just some common sensations which can be typically shared as a range of associations. Change is in the air. Nature is throwing a wild party and everyone is invited.

We believe that the month of October marked the beginning of another forward step for the freshmen to spruce themselves up. Last month witnessed a few white-collar events like Arunoday and Dhishan, which amplified the vocational acumen of the malaviyans alongside the much awaited techno-carnival fest techSRIJAN'18, showcasing the talents of the University and giving the students a voyage into the sea of amusement.

Across the transparent and impenetrable curtains, the future of MMMUT soared high like a bird ready to flap its wings and rise unto the horizon. Like a little dove, charm and festivity was sent from above to cast it's aura and charismatic elegance upon us all.

Try stepping out of your comfort zone and push yourself. You might surprise yourself with the outcome. With this message, The Editorial Board rolls out yet another edition of Tiresia wishing the malaviyans success in the upcoming major examinations.

<u>Faculty Advisor</u>

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Message from our Faculty Advisor

The past one month has indeed been a vibrant one and has offered the Indian culture a lot many aspects to celebrate and take pride on. Let us commence from the very beginning of October, i.e. October 2nd, when we observed the 'Swachh Bharat Abhiyan'. October 2nd is also celebrated as the birth date of two great Indian icons, the towering persona of Mahatma Gandhi whose very name inspires a journey from a man to Mahatma and Shri Lal Bahadur Shastri Ji, whose humility is personified across the seas. Further, he gave the slogan of the Indian cry – 'Jai Jawaan, Jai Kisaan'.

Moving onwards, October 9th is celebrated as the World Post Day by those countries which offer postal services. October 10th is observed as the Indian Postal Day. When we speak of these two landmarks, they are highly remarkable not only because of the significance of postal services, but as well as for this newsletter itself. Let us see the thing in this way, when writing is suffering like anything and letter writing is itself going through a crisis period, in a scenario when mailboxes and inboxes are taking over postboxes, writing something on a piece of paper is highly important and for this, I must praise the efforts of **The Editorial Board** team which tirelessly comes up with continuous and ceaseless issues of **Tiresia**. This month India also observed the most significant festive period

where one should not forget the Hindu deity, Lord Rama, as an iconic figure of high-spirited leadership who defines that even with a lack of proper resources, one can still win the battle of life.

October as a month closes in the Indian subcontinent with the celebration of the birthday of the Iron Man of India, Sardar Vallabhbhai Patel Ji alongside the equally sad loss of the former woman Prime Minister of India, Indira Gandhi Ji, who declared the glory of Indian women on a canvas of gold. At the close, India also witnessed the release of the world's highest statue, the statue of the Iron Man of India, as the Statue of Unity.

This month the malaviyans came forward to organize technical events like Techsrijan, and literary events like Arunoday. All of them put together made the campus of MMMUT vibrant and in this vibrancy, I am exulted that **The Editorial Board** is coming up with yet another sparkling issue of **Tiresia**. My best wishes are with them and I urge them to keep up their indomitable spirit.

With best wishes,
Faculty Advisor
Dr. Sudhir Narayan Singh
Associate Professor (English)
Applied Science Department

Tête-à-tête

WITH

Dr. ARISTIDES KIPRAKIS

Dr. Aristides Kiprakis is a research explorer at the School of Engineering, University of Edinburgh, UK. He recently visited Madan Mohan Malaviya University of Technology, Gorakhpur as a keynote speaker in the 5th IEEE International Conference of UP section for electrical, electronics and computer engineering (UPCON 2018). **The Editorial Board** got the opportunity to interact with him and talk to him about his experiences.

1. What difference do you find in the education system of your country and India?

The Indian education system is much more structured and rigid, whereas the UK's education system is flexible. The education system of UK allows the students to choose their own directions. The program allows the students to pick their own materials, resources and the method of their learning. Content of learning remains the same in both the countries. The students learn the same things irrespective of the place.

2. Being a keynote speaker, what are the ideas that you would like to share with your audience?

My field of research is smart-grids. I aim at management of resources for all the generations from end user point of view and not from the generation point of view. In my seminar, I talked about how we can use data, information and communication systems to support the power systems in the world and increase the supply. The power systems in the world have a limited capacity and they were built decades before. Currently we are on the verge of reaching that limit state condition.

To change the old systems with the new ideas is not only very expensive but also

time consuming. So we are suggesting an alternative to use information and communication system to take some of this burden from the power systems and strengthen the power systems.

3. You have travelled many Universities of different countries. What are the ideas and systems that you find very interesting in other Universities?

Once I visited a University in a different country. The engineering curriculum there was more flexible than our education system. There were very less written assessments.

Every year they had to carryout a project work which involved them studying different collection of subjects that would help them to enhance their practical knowledge. The project work became more and more complicated until they graduated. The students were marked on the quality of their work.

I liked their education program because the students learnt what they needed and at the same time gained experience. They learnt how to convert their theoretical knowledge into real life situations.

4. What advice would you like to give to the young, budding engineers?

Study harder. Try to see the big picture. Engineering is not about what's written in the book, rather it is about using the knowledge of the book to solve real life problems. We are not physicists or mathematicians. We use physics and mathematics to solve real world problems. You need to open your eyes and have a clear vision.

5. Would you prefer changing any decisions that you have made in your professional life, if you could?

I would not like to change any of my past decisions. People learn from their mistakes. Even I have committed several mistakes in my life, too. Those mistakes gave me experiences and everytime I grew as a person with better understanding and knowledge. I believe mistakes help us to take better decisions in life.

Campus Buzz

1. **IEEE, MMMUT Chapter** and **SAE Collegiate Club, MMMUT Chapter** jointly organized the annual techno-management fest **TECHSRIJAN** from October 12, 2018 to October 14, 2018.

2. **The Editorial Board** organized a group photo session for the final year students of B.Tech., MBA and MCA on October 23, 2018.

3. **The Social Engineers' Board** conducted **DHISHAN** from October 24, 2018 to October 26, 2018.

4. **The Entrepreneurship Development Cell (E-Cell)** successfully conducted **AAROHAN'18** from October 26, 2018 to October 29, 2018.

5. **The Editorial Board** conducted **ARUNODAY'18** on October 23, 2018 and October 28, 2018.

6. **Electronics and Communication Engineering Society (ECES)** conducted **INCEPTION'18** on October 28, 2018.

7. **University Innovation Cell** conducted **SPECTRA'18** from October 27, 2018 to October 29, 2018.
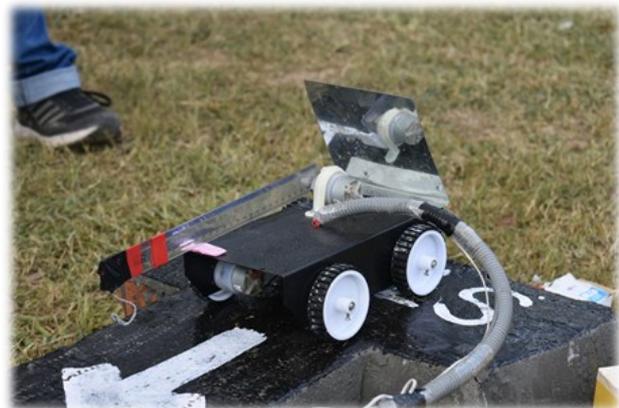
Glimpses of TECHSRIJAN

Campus Buzz

8. **Samvaad**, an interactive session for the freshmen of Civil Engineering Branch, was organized on October 11, 2018.

9. Get together, for the freshmen of all the branches, were organized in the University.

10. **Computer Engineering Society (CES)** organized the event **HELLO C** for the freshmen of Computer Science and Engineering branch on November 1, 2018.

11. A 11 membered team, **EFFIMALAVIYANS**, represented MMMUT at the national event **EFFICYCLE** held at LPU, Jalandhar.

12. NSS organized a **Run for Unity** on October 31, 2018 to observe the birthday of the 'Iron man of India', Sardar Vallabhbhai Patel.

13. 5th "IEEE UP Section International Conference on Electrical, Electronics and Computer Engineering (**UPCON-2018**)" will be organized from November 2, 2018 to November 4, 2018 by the University.

Glimpses of Arunoday

TECH inSIGHTS

Mail your answers at
literaryedb@mmmut.ac.in

CIVIL ENGINEERING:

A field was supplied water from an irrigation tank at the the rate of 120 lit/sec to irrigate an area of 2.5 hectares. The duration of irrigation is 8 hours. It was found that the actual delivery at the field which is about 4 km from the tank was 100 lit/sec. The run-off loss in the field was estimated as 800 m^3. The application efficiency in this situation is?

CHEMICAL ENGINEERING:

In a process, two feed streams are there and one output stream. The feed stream have the feed rates as 500 kg/sec and 600 kg/sec. What is the mass stored in the chamber in five seconds? (Output rate stream is 800 kg/sec)

MECHANICAL ENGINEERING:

In a cam follower mechanism the follower needs to rise through 20 mm during 60 degree of cam rotation, the first 30 degree with constant acceleration and then with a deceleration of same magnitude. The initial and the final speed of the follower are zero. The cam can rotate at a uniform speed of 300 rpm. The maximum speed of the follower is?

ELECTRICAL ENGINEERING:

Two transformers are to be operated in parallel such that they share load in proportion to these kvA ratings. The rating of the first transformer is 500 kvA and its pu leakage impedance is 0.05 pu. If the rating of second transformer is 250 kvA, then its pu leakage impedance is?

ELECTRONICS AND COMMUNICATION ENGINEERING:

The drain current of a MOSFET in saturation is given by $I_d = k(V_{GS} - V_T)^2$ where k is constant. The magnitude of transconductance g_m is?

COMPUTER SCIENCE AND ENGINEERING:

What is the output of following code?
```c
#include<stdio.h>
int main()
{
int i=6, *j, k;
j=&i;
printf("%d\n", i**j*i + *j);
return 0;
}
```

The winners of TECH inSIGHTS section of Tiresia Volume 10. Issue 2 are:

- Aseem Baranwal-B.Tech (CSE), Second Year
- Harsh Upadhyay-B.Tech (EE), Second Year
- Saurabh Singh-B.Tech (CE), Second Year

Rest of the answers were either unsatisfactory or late entry.

Cognitive Technologies

A product of the field of research known as artificial intelligence, cognitive technologies have been evolving over decades. Businesses are taking a new look at them because some have improved dramatically in recent years, with impressive gains in computer vision, natural language processing, speech recognition, and robotics, among other areas. They have the potential to enable organizations to break prevailing trade-offs between speed, cost and quality.

Over the next five years, the impact of cognitive technologies on organizations to grow substantially. Leaders of organizations in all sectors need to understand whether, how and where to invest in applying cognitive technologies. Hype-driven, ill-informed investments will lead to loss and sorrow, while appropriate investments can dramatically improve performance and create competitive advantage. Outline below are principles that should help leaders to make better decisions about cognitive technologies.

Organizations can embed cognitive technologies to increase the value of their products or services by making them more effective, convenient, safer, faster, distinctive, or otherwise more valuable. The applications of cognitive technologies fall in-to three main categories: product, process or insights. Product applications embed the technology in a product or service to provide end-customer benefits. Process applications embed the technology in an organization's work flow to automate or improve operations. And insight applications use cognitive technologies, specifically advanced analytical capabilities such as machine learning, to uncover insights that can inform operational and strategic decisions across an organization.

A famous early example of the use of cognitive technology to improve a product offering is the recommendation feature of the Netflix online movie rental service, which uses machine learning to predict which movies a customer will like. This feature has a significant impact on customers' use of the service; it accounts for as much as 75 per cent of Netflix usage. Not only cognitive technologies can be used to enhance products and services, they can also bring about entirely new classes of products and services that can create new markets and generate large gains for inventors.

Another category of cognitive technology application is automation. By automation we mean using computer systems to do work that people used to do. The result is that the work gets done faster, cheaper, bet-

ter, or some combination of the three. Automation tends to be internally focused; the organization that implements it, rather than customers, tends to be the primary beneficiary, generally through cost savings or more efficient use of resources.

The other category of cognitive technology application is creating insight. Natural language processing techniques, for instance, make it possible to analyse large volumes of unstructured textual information that has not yielded to other techniques. Machine learning can draw conclusions from large, complex data sets and our research on how companies are putting cognitive technologies to work has revealed a framework that can help organizations assess their own opportunities for deploying these technologies.
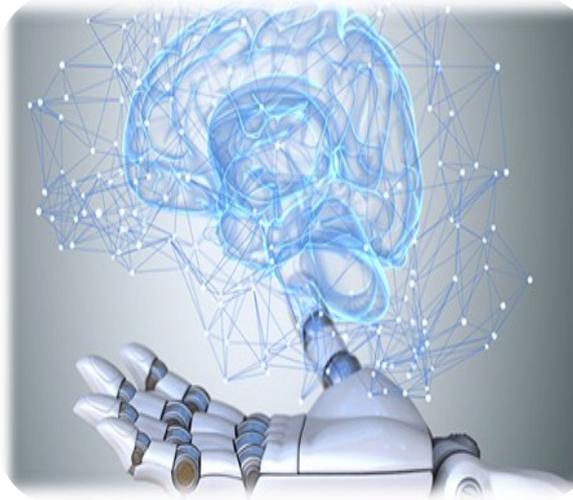
Understanding how to obtain the maximum benefits from cognitive technologies requires a careful analysis of an organization's processes, its data, its talent model, and its market. The use of cognitive technologies is not viable everywhere, nor is it valuable everywhere. In some areas it will become vital. We think the greatest potential for cognitive technologies is to create value rather than to reduce cost. And we believe that for most organizations and most applications, cognitive technologies will restructure work and make it more efficient, perhaps restraining the growth of jobs in certain areas, but not leading to large-scale reductions in workforce.

Using this framework, organizations can begin today to explore where cognitive technologies will benefit them most.

Cognitive Technologies

Experiments in Creating Tools to Understand and Extend the Human Mind

Amidst Aspirations

"Sometimes it's the journey that teaches you a lot about your destination."

-Drake

People tend to wonder sometimes if life could become soothing and pleasant, a mere whiff of air, the rustle of the fallen few and the smooth treading footsteps, imprinting their marks upon a glistening walkaway. Such notion develops into a students' expectation right before the threshold of college life. As adolescents leave home for their freshmen year of college, they are more or less 'let go' by their parents. Just on the brink of stepping into a new realm, what students learn from their friends, books and the internet is that they've got a life to figure out for themselves. The pertinent fundamentals of our culture define a statement that when an adolescent enters his college life he is supposed to be on his own. Now they are presented with two choices – to tread on the path pre-owned or to opt for the 'Road Not Taken'.

Starting university is the beginning of a whole new chapter of life. This chapter bears resemblance to a journey whose main twists and turns are centred around self-discovery and self-reliance, which in turn shape up the student`s general outlook on the dynamics of life. College is the perfect place to discover who a person actually is. Students are surrounded by new faces, places, and opportunities. It can be very easy to get lost in the desire to be that person that fits in. After all, who wants to go back to being the nerdy, awkward kid that was always alone? Before college, we might not have even explored our priorities in life. Once we recognize our core values, the road to discovering what makes us unique becomes clearer. These values represent one's unique and individual essence.

In attaining the desired perfection through self-discovery, students find out their true potential. However in the course of this journey, students are bound to make mistakes which play a

huge role in building the confidence to be who a person truly is. It's a journey and the sad thing is that we learn only from experiences. So as much as faculty, friends or batchmates can tell them things, students need to venture in this voyage and make their own mistakes in order to learn. College helps an indivisual to choose their own experiences and challenges. Each challenge portrays a better version of a students' potential than the day before and the experience acts as a catalyst for who we become. With the ups and the downs, the stress and the peace, a college provides a jolt of this experience. It is the prominent light, the first time we are left alone, outside of a comfort zone, with only ourselves, the people we meet, and the information we learn. No one bothers to look over one's shoulder, and there is rarely someone who has a preconceived notion of what a student is or what he might become.

The numerous factors that pose a demanding effort on a students' part as described by psychologists and experts include being a patient listener, mastering the art of asking, understanding that college is an imperfect friend filter, rethinking the risks of standing out and engaging only in the right conflicts, standing up to your beliefs and leveraging the resources provided. Four years of education helps increase rhetoric. The brain is stretched and expanded, cramming in vast amounts of information, even if it only sticks around for a short time frame before you forget it. Retention is not limited to academia though, as patterns of social behaviour and etiquette are adapted and conformed to certain situations. But while all of these factors are important and necessary, the one thing that can't be taught is who you are.

"Character cannot be developed in ease and quiet. Only through experience of trial and suffering can the soul be strengthened, vision cleared, ambition inspired, and success achieved."

-Hellen Keller

How To?

How to root an Android Device and what are its benefits?

Rooting is a term which describes the process of gaining root access or control over devices. A rooted device has way more access to its own hardware and software as compared to a non-rooted device. Root access is often compared to jailbreaking devices running the Apple iOS. However, these are two different concepts. In a way, rooting makes us the real administrator of our device.

Steps to root an android device:

There are numerous ways to root an android device. The safest of them includes rooting the device using an app. The Steps are:

1. Back up your essential data by copying it to another storage device.
2. Before starting, make sure your device is fully charged.
3. Now go to the '*Settings*' option and open '*About Phone'*. Tap on the '*Build Number'* tab seven times. This unlocks a new option in the *Setting* menu namely '*Developer Options'*.
4. Open *Developer Options* and check the empty boxes of '*USB Debugging'* and '*OEM Unlocking'*.
5. There are a number of apps available for the upcoming steps like *KingRoot, One Click Root, Firmware.mobi* and the list never ends. For instance, we will use '*Kingo Root'* app for the purpose. Download and install *Kingo Root* app.
6. After checking the compatibility of your device, a *One Click Root* button appears. Tap on the appeared button and wait for a while.
7. After the rooting process is successful, a large green check mark appears.

Benefits of rooting a device

1. Rooting an android device lets us install custom ROMs which means we get a new device software-wise. Custom ROMs are more user friendly and offer several performance fixes than stock ones.
2. It enables the user to get rid of unwanted ads and pop ups more easily than on a non-rooted device. Also, it lets us gain control over CPU clocking which in turn could lead to device's better battery life and performance.
3. A rooted device gets more customization options for displays and also has the access to install the apps which were incompatible earlier.
4. Another benefit of a rooted device is its access to the root files of the system. If handled with caution, the performance and configuration of the device could be completely altered from what it had been earlier.

FINAL YEAR MEMBERS

Aaruni Khare

Anurag Dhar Dubey

Archish Jaiswal

Arushi

Krati Tiwari

Manisha Mishra

Narendra Mishra

Shreya Mishra

Shreyansh Srivastava

Shubham Pathak

Somiya Bhandari

चुनावी दशहरा

"छल कपट के अनंत काल में अभिमन्यु को फसते देखा है, धर्म, जाति, कल्पना के नाम पर समाज को बटते देखा है, मैंने रावण को हँसते देखा है।"

THIRD YEAR MEMBERS

Aditi Shukla

Ankit Kumar Tripathi

Anurag Sonkar

Ashwani Dubey

Mayank Prasad

Pragya Singh

Praveen Kumar Gupta

Rishika Jaiswal

Sarthak Srivastava

Saumya Rai

Shivani Dubey

Sungtiben Jamir

Vineeta Singh

Yashasvi Anand

नेताओं का दशहरा लचीला है और साधारण मनुष्यों का उस लचीलेपन में विलीन। पंडित या पंचांग वास्तविक दशहरे की तिथि तो बता सकते हैं परंतु इस चुनावी दशहरे की प्रारम्भिक व अंतिम तिथि बताने में कोई भी पण्डित या पंचांग असमर्थ है। व्यंग-बाण, शासनकाल की असफलता, चोर, डाकू, फरेबी जैसी शब्दावलियों पर यहाँ जोर दिया जाता है। असंभव आश्वासनों और झूठे प्रलोभनों से उन्हें पूरा विश्वास है कि वे मतदाताओं को जाल में फसाने में कामयाब होंगें।

भारतीय प्रजातंत्र में परिवारवाद प्रदूषण-सा व्याप्त है और वे इन्हीं के साथ अपना चुनावी दशहरा मनाने की तैयारियों में लगे रहतें हैं, और तो और, ऐसे नेताओं को अपनी विरासत का अहंकार भी है। जैसे प्रत्येक वर्ष दशहरा आता है, वैसे ही इनकी चिकनी चुपड़ी बातें भी । उन्हें स्वयं के ख़ास होने का अहंकार है। उनमें संसद से लेकर पंचायत तक को भ्रष्टाचार में जकड़ने की अनूठी कला व्याप्त है, जैसे मंदिर के पुजारी में इन नौ दिनों में भक्तों को। इसी कारण लोकसभा से लेकर पंचायत तक के चुनाव इतने खर्चीले हो गये हैं कि लाखों-करोड़ों की

रकम कब और कहाँ उड़ जाती है, पता ही नहीं चलता।

हमारे प्रिय नेता इस दशहरे में विज्ञापन के माध्यम से हम सभी को दशहरे की बधाईयाँ तो अवश्य देते हैं लेकिन उनका वह व्यंग्य सा मुस्काता चेहरा कुछ और ही कहता है जिसको समझना इतना आसान नहीं है। अब कोई यह न पूछे कि देश की प्रगति में उनका क्या योगदान है। महात्मा गाँधी भी एक नेता थे। उन्होंने लाखों-करोड़ों के मूल्य की सुख-सुविधाओं का त्याग कर दिया लेकिन आज के नेता शब्द-पूजा को शस्त्र-पूजा के रूप मे प्रयोग करते हैं और यही वास्तविकता है कि यह शब्द पूजन ही उनकी असली मानसिकता है अर्थात् चुनावी ढकोसला।

हम दशहरे के पावन अवसर पर रावण को जलाकर उसके वध का प्रदर्शन तो अवश्य करते हैं लेकिन क्या हम अपने मन और समाज से वास्तविक रावण की मृत्यु कर पा रहे हैं? क्या हम स्वयं राम बन पा रहे है? इन्हीं प्रश्नों का उत्तर जानना चाहता है यह आगामी दशहरा। विश्व के सभी धर्म के लोग अपने शरीर और मन की शुद्धि के लिये उपवास रखते हैं। आईये इस दशहरे, हम भी इस उपवास को रखकर अपने मन एवं बुद्धि को शुद्ध करें और ऐसे नेतृत्व का चुनाव करें जो लोभ से हमें बाँधने का प्रयत्न न करें। हमें अपने परिवार और देश का भविष्य नहीं बेचना है और एक ऐसे राष्ट्र का निर्माण करना है जिसमें हमारे मन और समाज के रावण की मृत्यु हो और हम खुशी से दशहरा मनाएं।

SECOND YEAR MEMBERS

Abhishek Singh

Akshat Singh

Anuj Dubey

Astitva Mishra

Avaneesh Shukla

Ishita Singh

Mayank Srivastava

Nikhil Kumar

Nitya Anand

Shikhar Trivedi

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Shivani Parashar

Suryansh Kumar Pathak

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