



SHREE L.R. TIWARI

**COLLEGE OF
ENGINEERING**



Velocity

*The newsletter of Computer
Engineering Department*

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Vision

To be world-class institute & front-runner in educational & socioeconomic development of the Nation by providing high quality technical education to students from all sections of society

Mission

1. To develop technical, analytical, theoretical, competencies, managerial skills & practical exposures.
2. To strengthen-versatility adaptability & choose for the excellence amongst students with highest ethical values as their core strength.

3. Overall development of students, faculty & staff by providing encouraging environment & infrastructure for learning skill development & research.

Program Educational Objectives

1. To inculcate students with the skill of problem solving in various fields using the knowledge of computer engineering.
2. To excel in leadership qualities, exhibiting ethical attitude and good communication skills.
3. To Pursue higher studies, engage in professional development, research and entrepreneurship and adapt to emerging technologies.

Message from Head of the Department

We are delighted to launch our first edition of the CE Newsletter. This newsletter highlights many latest wonderful achievements that have brought laurels to the department both by students and staff, including academic's, co-curricular and extra-curricular activities along with faculty achievements. It also gives a summary of the various developmental activities done by the department. We all from the Department of Computer Engineering believe that, the sky is the limit and hence, so there is always a large scope for improvement. This encompasses a right balance between research & development and teaching & learning and very much in line with the vision and mission of Computer engineering department. This newsletter will provide a glimpse of our student achievements in the year 2018-19.

Dr. Vinayak D. Shinde

Head & Associate Professor, Dept. of Computer Engineering

Message from Editor

I am immensely honoured to write as the guest editor of the first issue of the Computer Engineering Department Newsletter. I would like to thank Dr. S Ram Reddy, Principal, SLRTCE for providing, the faculty and the students, an excellent platform to keep themselves updated about all the recent events. I would also like to thank Dr. V.D. Shinde, Head of Computer Engineering Department for his valuable suggestions and support. This issue covers all the major events & workshops conducted in the SLRTCE. As a staff, I feel delighted to see the students participating in different events and deliver their best. The departmental Newsletter portrays the hard work shown by the students in such events and workshops effectively. I wish my best to The Departmental Editorial Board for the future and hope the Newsletter continues its commendable work in keeping us updated.

Sampada M. Watane



Technology Trends for 2019

1. Machine Learning will advance Artificial Intelligence (AI)

Artificial Intelligence (AI) innovations will continue to bring scientific breakthroughs, in part, thanks to the vast amounts of data that new technologies have been collecting and is now available.

In 2019, Machine Learning and Artificial Intelligence will be embedded in the business platform creating and enabling smart business operations. In the Artificial Intelligence space, China is going to leave the U.S. behind, emerging as a leader in AI developments and applications. Advances in Machine Learning technology and algorithm training will result in new and more advanced AI. Autonomous vehicles and robotics are the two industries that will see the most rapid developments during 2019.

In 2019, there is going to be a convergence of Artificial Intelligence, Machine Learning, and Deep Learning in business applications. As AI and learning technologies get to work together in order to reach better results, AI will have greater accuracy at all levels. So far, humans have only developed Narrow Artificial Intelligence. A superior AI, though, is in the future of mankind. How far should humans go with AI development is still a subject of controversy. Is this really going to be mankind's last invention?

2. Quantum Computing (Supercomputing)

Quantum Computing, still an emerging technology, is one of the most fascinating things researchers, organizations, and governments have been working on in this

century so far. The race toward building the first fully-functional, fully-working quantum computer (also called supercomputer) is on. With its impressive computational power quantum computers will most like be a cloud service in the near future rather than on-premise machines. IBM is already offering cloud-based quantum computing services. The first quantum computer is going to have a significant advantage over the others. In 2019, the competence to achieve supercomputer supremacy will intensify. As a consequence, the last mile in the race will remain mostly secretive, for obvious reasons.

3. Augmented Reality (AR) and Virtual Reality (VR)

Advances in Augmented Reality (AR), [Virtual Reality](#) (VR), and Mixed Reality (MR), all of which can be summarized in R+, will continue to be at the forefront of attention during 2019 with some fascinating new practical applications for industries. R+, which once was only found in video gaming has been quickly advancing to become a useful tool in industries such as engineering design, manufacturing, healthcare, space exploration, and many others.

In 2019, Virtual Reality is going to open up to innovative industrial applications that will change how people work and collaborate across geographies.



Augmented Reality has been rising in the Virtual Reality's shadow for the past year. But in 2019, AR is set to grow exponentially.

4. Global Internet of Things (IoT) security breach

Hackers never sleep. Everyone in the cybersecurity industry knows that. As long as you connect something to the Internet it immediately becomes vulnerable.

In the past years, we have seen how hackers have turned to unsecure Internet of Things (IoT) devices to create an extensive botnet which then they could use to push enough traffic to take down Dyn, the DNS provider. As a way to refresh your memory, here is how the DDoS attack using IoT devices happened in 2016. A quick look at the news tells us that not much has been learned. However, the great number of security breaches occurred during 2018 should serve as an alert of what can happen at a global scale in 2019 if organizations don't take the necessary precautions. Analyst firm Gartner forecasts that 20.4 billion connected things will be in use worldwide by 2020. And with the rise of autonomous things --I will call this the Internet of Autonomous Things (IoAT)-- there is a good chance that many of these things will show a certain level of weak security.

In 2019, it will be paramount for IoT manufacturers and all of their supply chain to dramatically increase the security in all the products that come out to market. It can be a connected refrigerator, a robot, a drone, a vehicle, or a health tracker.

Manufacturers must implement a level of security that keeps hackers at bay. Otherwise, there is a good chance we are going to witness a global IoT security breach in 2019.

5. Blockchain technology

In 2019, for the delight of organizations, Blockchain is going to bring the first enterprise applications in active use. The most innovative corporations will start using Blockchain as a way to improve collaboration. Blockchain in 2019 comes out cryptocurrency transaction and becomes an integral part of the business platform. Blockchain enables transactional transparency across a variety of business functions. In 2019, Blockchain will be present in many industries at the core of business innovation.