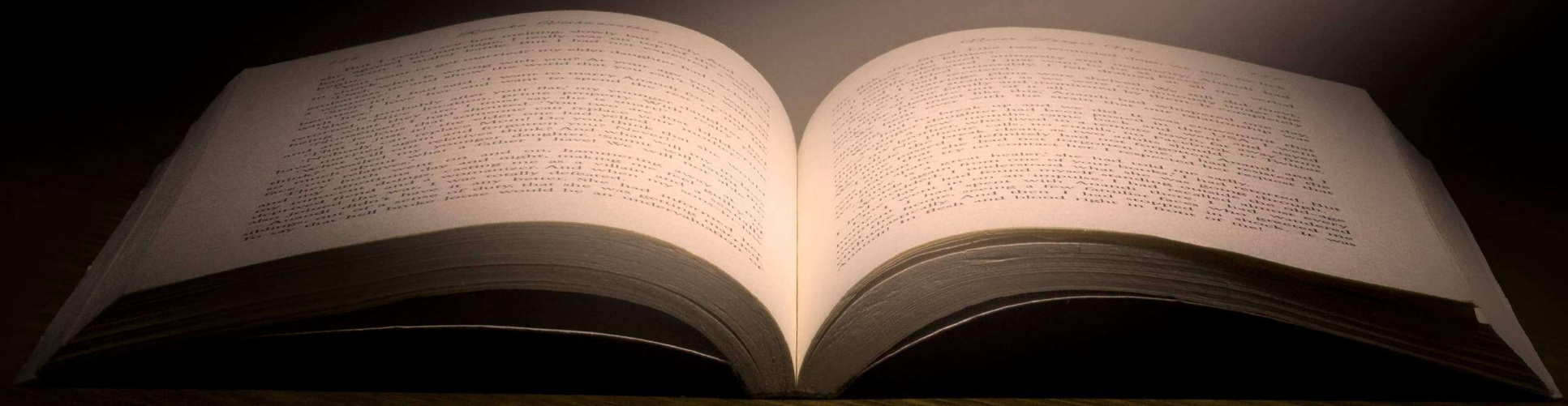
SARANATHAN COLLEGE OF ENGINEERING

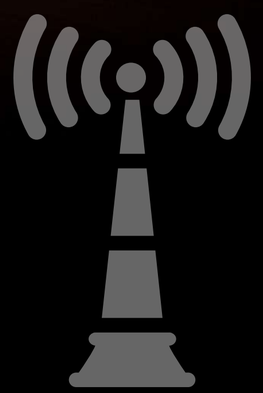
proudly presents

WIZARDZZ

VOLUME-18



E-Magazine from the Department of
Electronics and Communication Engineering



An half yearly issue by Department of ECE

FROM HOD'S DESK

Dr.M.Santhi,M.E.,Ph.D
HOD/ECE

It gives me an immense pleasure that our ECE department is releasing an "e-magazine" named WIZARDZZ-Volume 18 as a pioneer of the department activities for the even semester of the academic year 2020-2021.

Apart from technical skills, our students and the faculty members may have talents in literature also. Our ECE department intends at keeping students abreast of the recent technological trends and due consideration is paid to improve their skills in communication, fine arts, etc. I hope this e-magazine provides an oppurtunity to the students and staff members to lend free expression to their pioneering and ingenious thoughts.

This electronic magazine plays an active role in gaining hottest developments in the field of engineering and also presents the attainments of the department.

I congratulate the team of staff co-ordinators and students of WIZARDZZ-Volume 18 for their luminous and novel efforts. I wish them all the very best for all their future accomplishments.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Vision of the Department

To become a leading department of Higher Learning and a Research Centre of Excellence in Research in Electronics and Communication Engineering.

Mission of the Department

- **M1:** To enable budding engineers to obtain technical exposure in various areas of Electronics and Communication Engineering.
- **M2:** To nurture career improvement.
- **M3:** To initiate and sustain research activities in the department in cutting edge areas of Electronics and Communication Engineering.
- **M4:** To develop professional and ethical attitude in the students.

Program Educational Objectives (PEOs)

Graduates of Electronics and Communication Engineering will

PEO1:

have a strong foundation in the required sciences in order to pursue studies
in Electronics and Communication Engineering.

PEO2:

have a broad exposure to the students in various topics related to Electronics
and Communication Engineering fields, to enable them to excel in their professional
career / higher studies.

PEO3:

possess innovative skills in order to solve the technical problems which will
arise in their professional life.

PEO4:

have professional and ethical attitude and an ability to visualize the
engineering issues in a broader social context.

Program Outcomes (POS)

Engineering Graduates will be able to:

1. Engineering knowledge:
Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2.Problem analysis:
Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3.Design/development of solutions:
Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems:
Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage:
Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

6. The Engineer and society:
Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability:
Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics:
Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. individual and team work:
Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. Communication:
Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance:
Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning:
Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

Graduates of Electronics and Communication Engineering will be able to:

PSO1:

Comprehend and demonstrate the principles and concepts of Semiconductor theory, Signal Processing & Embedded systems in the fields of Consumer Electronics, Medical Electronics and Defence Electronics.

PSO2:

Apply emerging information and Communication Engineering Techniques to solve real time problems

ACHIEVEMENTS

- **M.P.Kaviya, S.Hari Ganesh, K.Kaviya, S.Bharath Hari - 2nd year A - won Community Prize for successful contribution of project on "Abode Cleaning Assistant (Bluetooth RC Control)" - may 2021**
- **V.S.Roshana - 2nd year B - won First prize in the event "Rebuttal Rebels" at TECHASTRA'21 - June 2021**

PARTICIPATION

- **Karthiga Devi G** - 3rd year A - **CAMPUS AMBASSADOR INTERNSHIP(ISP'20)** - Internshala - November 2020 to January 2021

- **Sivaram R** - 3rd year B - **"Research internship at END NOW FOUNDATION"** - Internshala - June to July 2021

- **Keerthana R** - 2nd year A - participated in the **"Entrepreneurship & Digital Innovation"** - Lingaya's Lalita Devi institute of management and sciences - June 6, 2021

- **Vinodhini V** - 2nd year B - participated in the online quiz competition on **“Maths Quiz”** - Sri Krishnasamy Arts & Sciene College - June 2021

- **Roshana V S - 2nd year B**
  - **Presented a paper on "Economics of fuel price hike : A line of no control" - St.Joseph's College (Autonomous) Devagiri, Calicut**
  - **Webinar on "WIE Tales: College of Corporate" - Panimalar Institute of Technology, Chennai - June 2021**
  - **Webinar on "Reliability of Power Converters" - Panimalar Institute of Technology, Chennai - June 2021**
  - **Webinar on "Electric Vehicle Technology" - CSI College of Engineering, Ooty - June 2021**
  - **Webinar on "The status of Discrete and Integrate GaN devices" - Panimalar Institute of Technology, Chennai - June 2021**

- **Roshana V S - 2nd year B**
  - **Webinar on "Power Electronics: A Research Perspective" - Panimalar Institute of Technology, Chennai - June 2021**
  - **Webinar on "GaN HEMT for efficient power conversation" - Panimalar Institute of Technology, Chennai - June 2021**
  - **Webinar on "Insight of Preparing Research article and Effective usage of Mendeley Software" - Jai Shriram Engineering College, Tiruppur - June 2021**
  - **Webinar on "BLDC Drive and control systems for electric vehicles - Oppurtunities for young Engineers" - Panimalar Institute of Technology, Chennai - June 2021**
  - **Webinar on "Roadmap to Research" - Jai Shriram Engineering College, Tiruppur - June 2021**

- **Roshana V S** - 2nd year B
    - Participated in "Quizion - Quiz Contest" - Panimalar Institute of Technology, Chennai - June 2021

- **Deebiksha D**- 1st year A - participated in "A Millennial's Dream" conducted - Infosys - May 2021
- **Karthika Mohan** - 1st year A - participated in the "TopCoders'21" organized by E-Box Colleges in association with Virtusa and TiE, Coimbatore - 5th March 2021

- **Akaash T U** - 1st year A - participated in "A Millennial's Dream" conducted - Infosys - May 2021

- **Lakshadheepa C** - 1st year A - Workshop on "Ethical Hacking" - National Institute of Technology, Tiruchirappali - December 2020

PUBLICATIONS

- **M.Santhi , P Narayanasamy, S Gopalakrishnan, Custom NoC topology generation using Discrete Antlion Trapping Mechanism, Integration, pp. 76-86, Vol. 76, Issue. 1, 2021**

- **S. A. Arunmozhi, R.S.Navamani , S.Nivetha , M.Nivethitha , S.Loramary, INCIDENCE OF FATAL PEDESTRAIN COLLISION AND VEHICLE SPEED CONTROL, International E-Conference on Recent Advances In Computation,Communication,Internet Of Things and Artificial Intelligence, M.Kumarasamy College of Engineering, Karur, 31st March 2021 and 1st April 2021.**

- **S. A. Arunmozhi, M. Salai Gayathri, Miniaturized Dual-Band Wearable Antenna For Body Centric Communication System, National Virtual Conference on Intelligent Technology in Electronics, Computing and Communication, 8th January 2021,Karpaga Vinayaga College of Engineering and Technology**

- S.A.Arunmozhi, A.Abinaya, S.Anusha, J.Divyadharshini, R.Hemamalini, Video Steganography using Dual Code Data Shielding, Journal of Electronics and Tele-communication Engineering, Vol.6, No.1, PP. 1-8, Jan 2021
- V.Mohan, D.Venugopal, S.Ramesh, S.Janupriya, Sangsoon Lim, Seifedine Kadry, Pattern Recognition of Modulation Signal Classification Using Deep Neural Netwoks, Computer Systems Science and Engineering, 2021
- P.Shanmugapriya, V.Mohan, A.Revathi, C.Jeyalakshmi, C.Malarvizhi, Robust Noise Classification using New Noise Extraction Approach, Turkish Journal of Physiotherapy and Rehabilitation, 2021
- J. Eindhumathy, M. Anthuvan Lydia, FPGA Implementation of Multichannel RF Transceiver Based On Sigma Delta Modulation, Journal for the Study of Research, 21st February 2021, Vol.14, No.2, PP. 22-25

- **M. Mahendran, G. Sivakannu, IoT Based Implementation of Smart Bin Wastage Management, Journal of Xidian University, 21st February 2021, Vol.15, No.2, PP. 234-239**

- **V. Koushick, C. Divya, SD. Sairam, Dual Resonant Stacked Slotted Microstrip Patch Antenna Integrated with CSRR Metamaterial Loading Techniques, Journal of Huazhong University of Science and Technology, 21st February 2021, Vol.50, No.2**

ARTICLES

KARDASHEV SCALE

In 1964, Kardashev came up with the idea that the status of a culture, as a whole, depends on two primary things: Energy and technology. Kardashev scale is a tool created to categorize both human civilization and the civilizations of extraterrestrial beings. On this scale, a civilization is ranked based on its energy production and consumption levels.He theorized that a civilization's technical advancement runs parallel to the amount of energy that the civilization can harness and manipulate.

TYPES:

Type I - 10^{16}W, (10,000,000,000,000,000 Watts)
Type II - 10^{26}W,
Type III - 10^{36}W.
For Earth, this value comes to roughly 7×1017 watts.
That's 0.7 of the way of Type 1.

KARDASHEV SCALE

Type 1 - Planetary

This type of Civilization has complete control over the energy of its 'host planet'. It would be capable of collecting all the starlight that falls on the planet. Other than coating the surface completely with solar panels, collecting such vast amounts of starlight could be achieved using solar power satellites, transmitting the energy to the surface wirelessly.

Power from fusion reactions on an industrial scale could also be used to produce similar amounts of energy over geological timescales.This type of civilization could utilize all the energy it canproduce (thermal, hydro, wind, etc).

KARDASHEV SCALE

Type 2 - Interplanetary

This type of Civilization not only utilizes the energy of one's nearest host star but controls the energy of their entire 'host star'. The power achieved could transfer energy anywhere in the solar system, a proposed way of doing so via the hypothetical solar-powered satellites called Dyson Sphere

Alternatively, nuclear fusion (gaining energy from the heat of reactions) is another process. If so, we could control every planet and asteroid in the solar system.
Understandably, the Dyson Sphere has become a staple in the search for extraterrestrial life. If you can spot a Dyson Sphere out in space, aliens should be not far behind.
(Check out KIC 8462852)

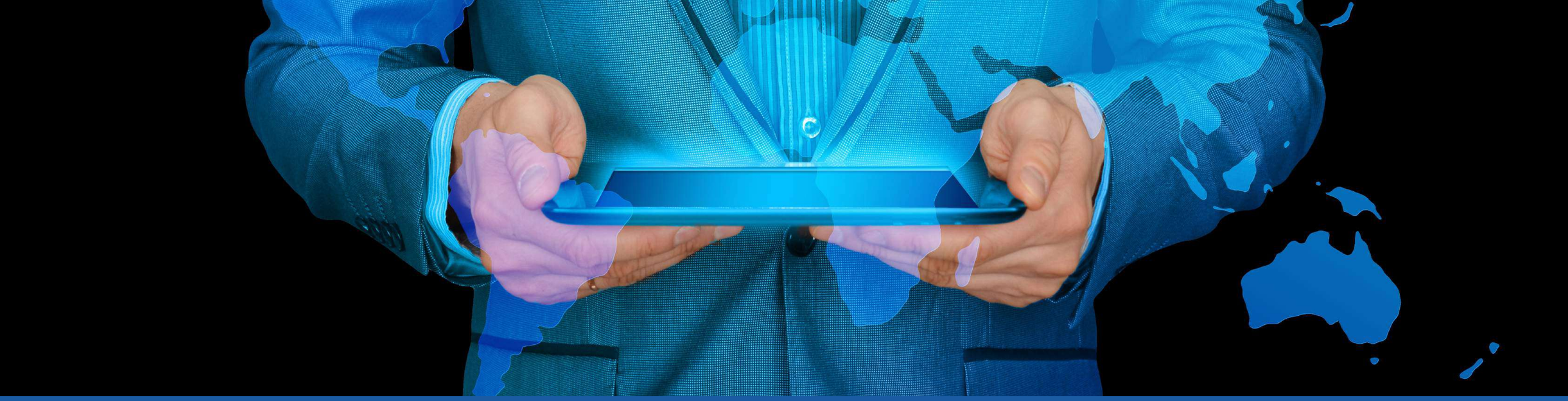
KARDASHEV SCALE

Type 3 - Interstellar

This type of civilization can freely move throughout the 'galaxy', capturing energy from nearby stars while colonizing hospitable planets. This could be achieved using a whole population of Dyson spheres or advanced structures around all the stars in a galaxy, or by tapping the energy of the Black Hole at the center of the galaxy.

About 1 in 5 Sun-like stars have an "Earth-sized" planet in the habitable zone, with the nearest expected to be within 12 light-years distance from Earth. Assuming 200 billion stars in the Milky Way, that would be 11 billion potentially habitable Earth-sized planets in the Milky Way, rising to 40 billion if red dwarfs are included. The rogue planets in the Milky Way possibly number in the trillions.

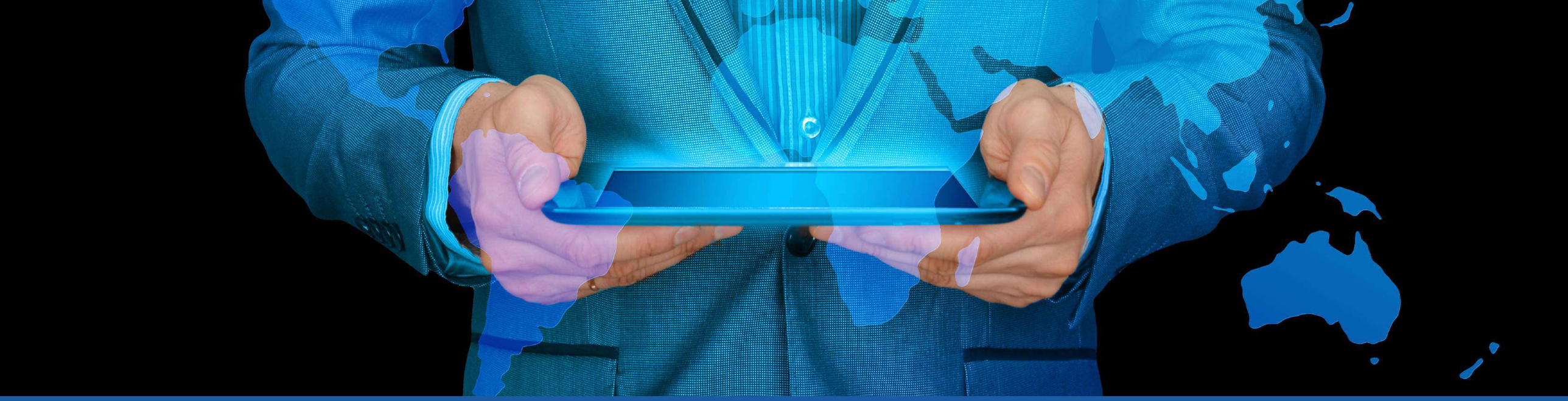
Mohamed Uwais K
3rd year B



DAKNET

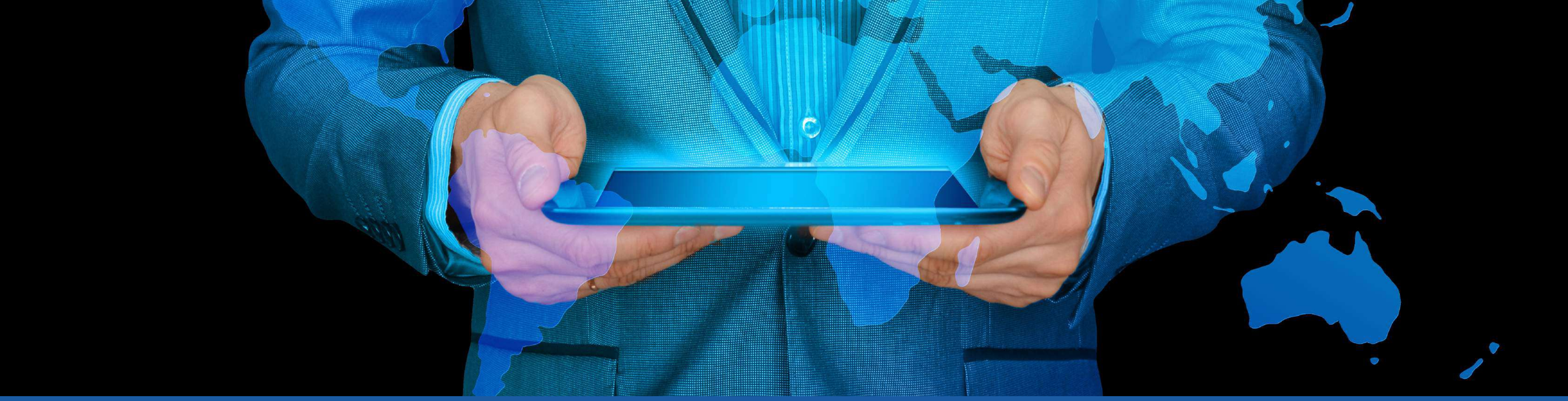
DAK Net is the term derived from the Hindi (an Indian Language) word DAK meaning Post which is a form of communicating a message in the form of mail. This form of communication is through a Wireless Network providing internet at a low cost to the rural areas. Even though this is not a permanent internet service, it connects the rural areas to the urban.

It is an ad hoc network. It uses wireless technology to provide asynchronous digital connectivity. Combines a physical means of transportation with wireless data transfer. It uses store and forward technique through Wifi which is described as "cached wifi intelligence".



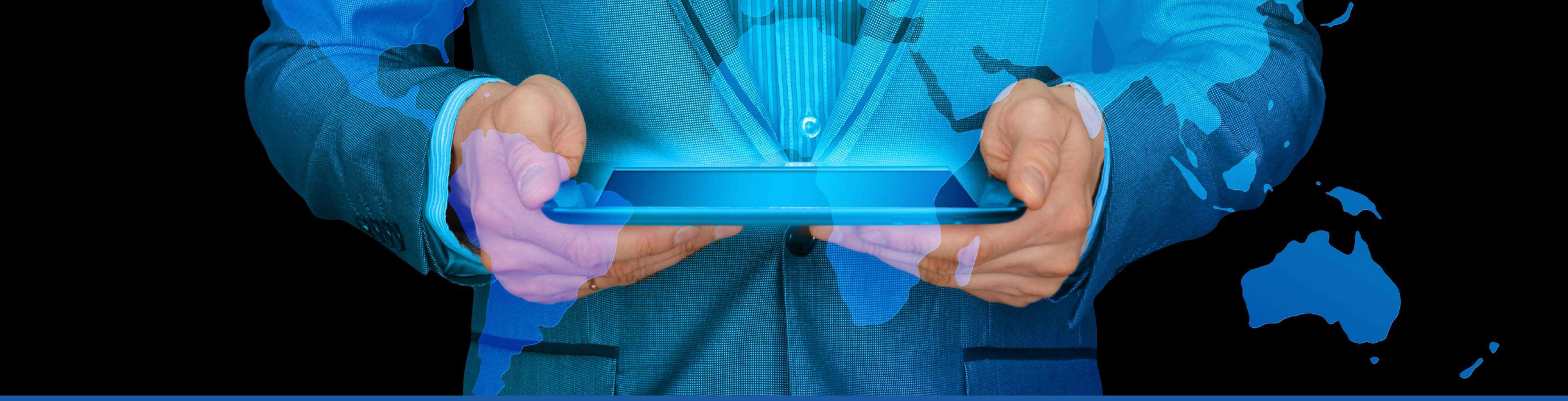
MAP (MOBILE ACCESS POINT) : A Movable transceiver ,which may periodically receive and transmit digitized information to and from Kiosk and periodically received and transmit , digitized information to and from a server acting as an Gateway to the internet and Telephone network

kiosk : •The facilities at a physically location where a client computer may be available for customer access or the physical locations.where a physically movable device may be made available for customer access. A client computer kiosk may be sited to enable effective transmission to and from a Mobile access point



HUB(Internet access point) : A Computer device with direct, real-time connection to the Internet and other national and international communications infrastructure or a common connection point for devices in a network. Hubs are commonly used to connect segments of a LAN. A hub contains multiple ports.

The primary advantages of a VAN (Value-added Network) are its low cost and ease of set up. No laying of copper or fiber to each village or trying to establish costly long distance wireless links or satellite uplinks. AVAN takes advantage of existing transportation infrastructure to create an affordable broadband network. Latency or delay of this network is higher than other networks. Higher per day data throughput than other low-bandwidth technologies such as telephone modems.



Dak Net provides the ability to seamlessly upgrade to the always on broadband connectivity. The wireless broadband connectivity provides sophisticated services like voice over internet protocol which allows "normal" real-time telephony. DakNet supports easy user-interface and low cost hardware that allows individuals, with no professional skills of using communication devices, operate the software and get connected.

A Mobile Access Point network was deployedforBhoomi, a computerization of land recordsinitiative in Karnataka (India) which has been acknowledged as the first national eGovernance initiative in India. A MAP was mounted on an existing public government bus that provides connectivity to villages up to 70km away.

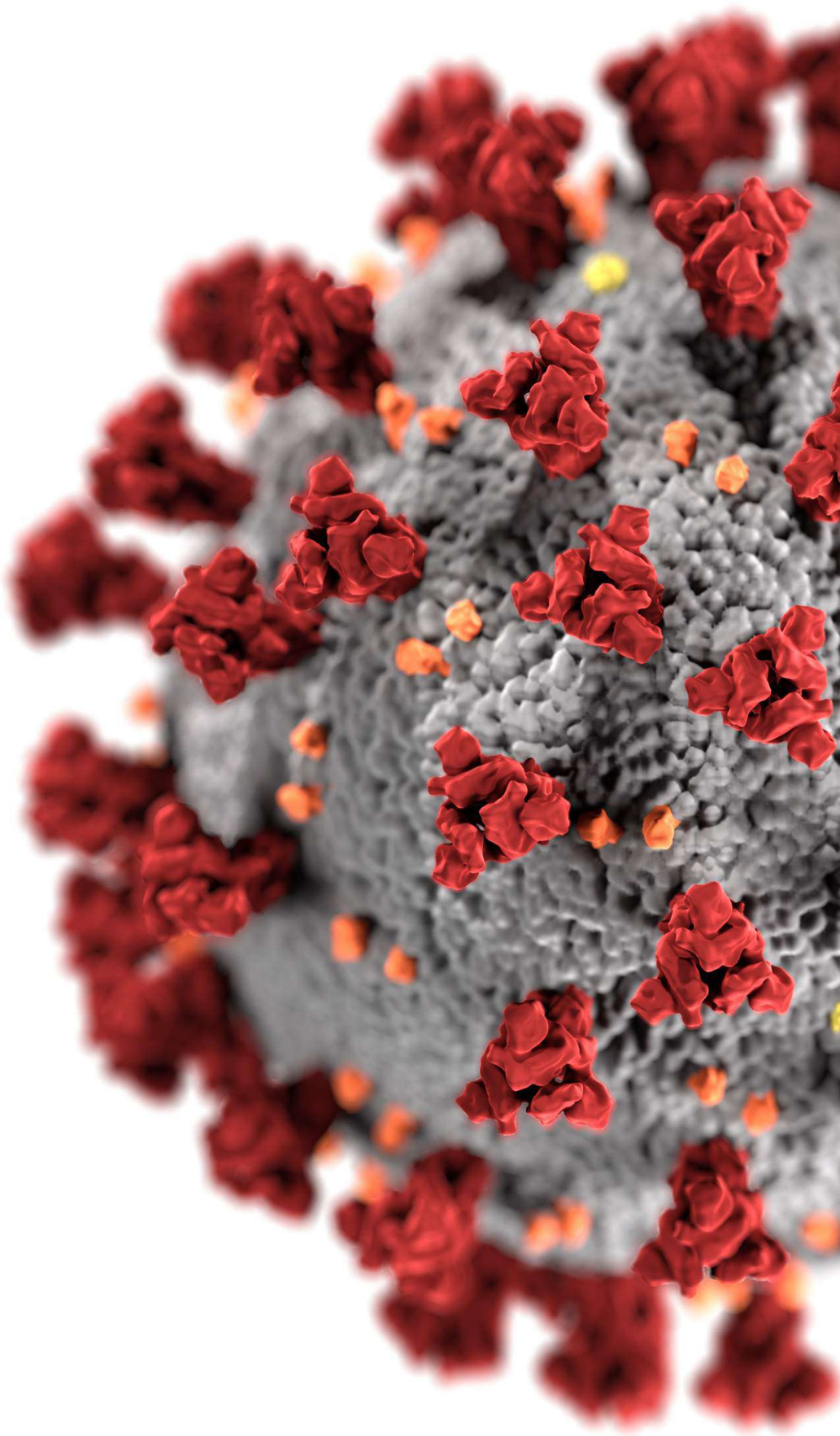
Priya S
3rd year B

MUSHROOMING ONLINE COURSES

DURING PANDEMIC

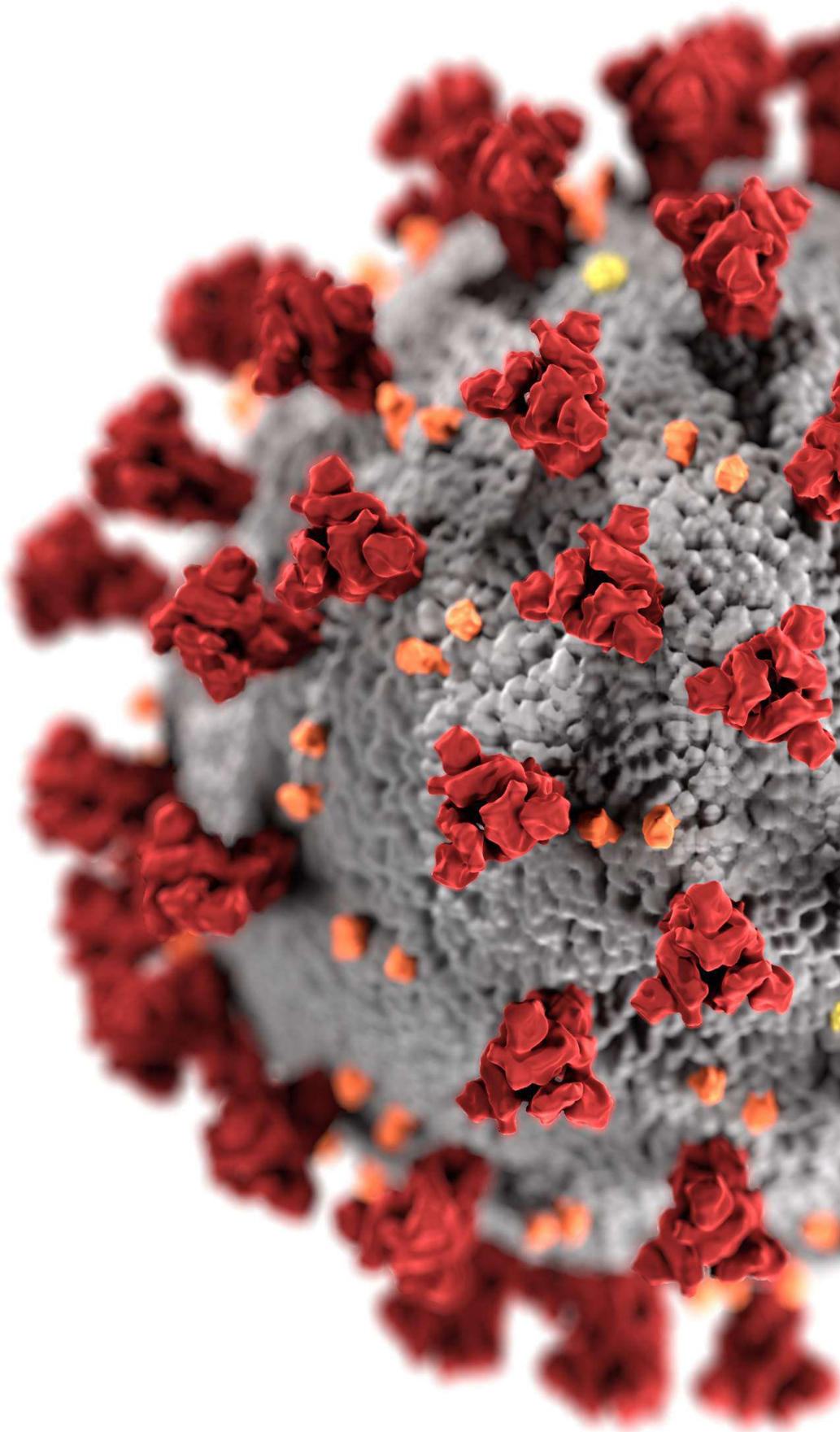
LOCK DOWN IS FOR PHYSICAL STUFF, NOT FOR MENTAL STUFF

In the current situation, we face several educational problems but we are solving it via technology. we have n number of online teaching platforms where we can choose whatever we want to learn with or without fee. Several websites are providing free certification courses and that will be useful for those who are pursuing under graduates as well as post graduates. Even we, students can also do Webinars through Google Meet.



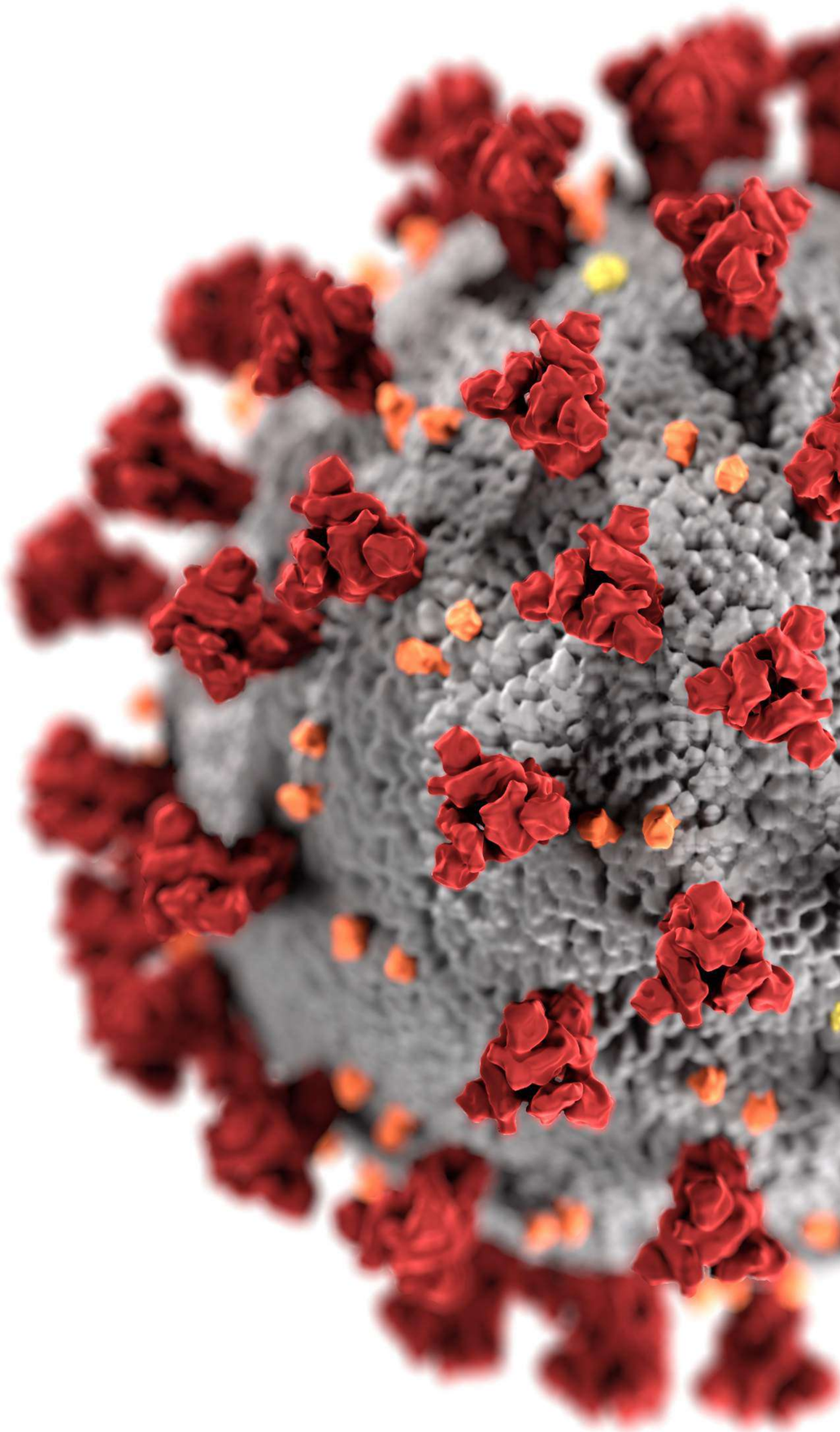
When we start doing all these things, we will learn communication skills and can build confidence. We need not worry about stage fear since we are going to interact with people via zoom. Moreover, we are technologically improving. We seldom use online classes but now it has become mandatory to attend online classes due to the current situation. Several online teaching apps are promoted via television and social media. Before years, we don't have much platforms to relish our knowledge but now everything knocks our door. What we have to do is to use all those keys to open our intelligence. Initially, Online classes can be done by some websites alone but now everyone started online classes. It is not only because of the current situation but also the technology improvement.

In offline classes, when we have doubts, we will search our teacher to clarify it. But this kind of online classes made us to clarify with Google so it is more beneficial than offline mode. When we find solutions for our own doubts, it stays long in our mind because the Solution comes from us. When we are attending offline classes, we need to carry note books and pens to take necessary notes. But when we are attending online courses, we need not carry anything as they are providing special page for taking notes. So what we have to do is to open the notes column and take notes when required. We can refer the notes whenever needed and it won't get torn or fade. Some young buds are working hard to increase the number of certificates alone but we have to work hard to acquire knowledge also.



Certificates are quantity but knowledge is a quality. When we do online studies, we need not stick to the patterns. we can be choosy while selecting the courses. We can do whatever we want to learn. Moreover, we can be flexible while attending classes as we need not be in a formal attire. Most of the people have the habit of doing online courses in the weekends. Students are registering for free online courses more when compared to paid online courses. While choosing free online courses, we should be very passionate about the course so that we can learn it very easily. We have several technological online courses but we have less medical courses. Students will be glad if they would provide some more basic medical courses like how to measure blood pressure and basic knowledge on tablets. I hope most of us know about Internships. It is the way of learning things practically.

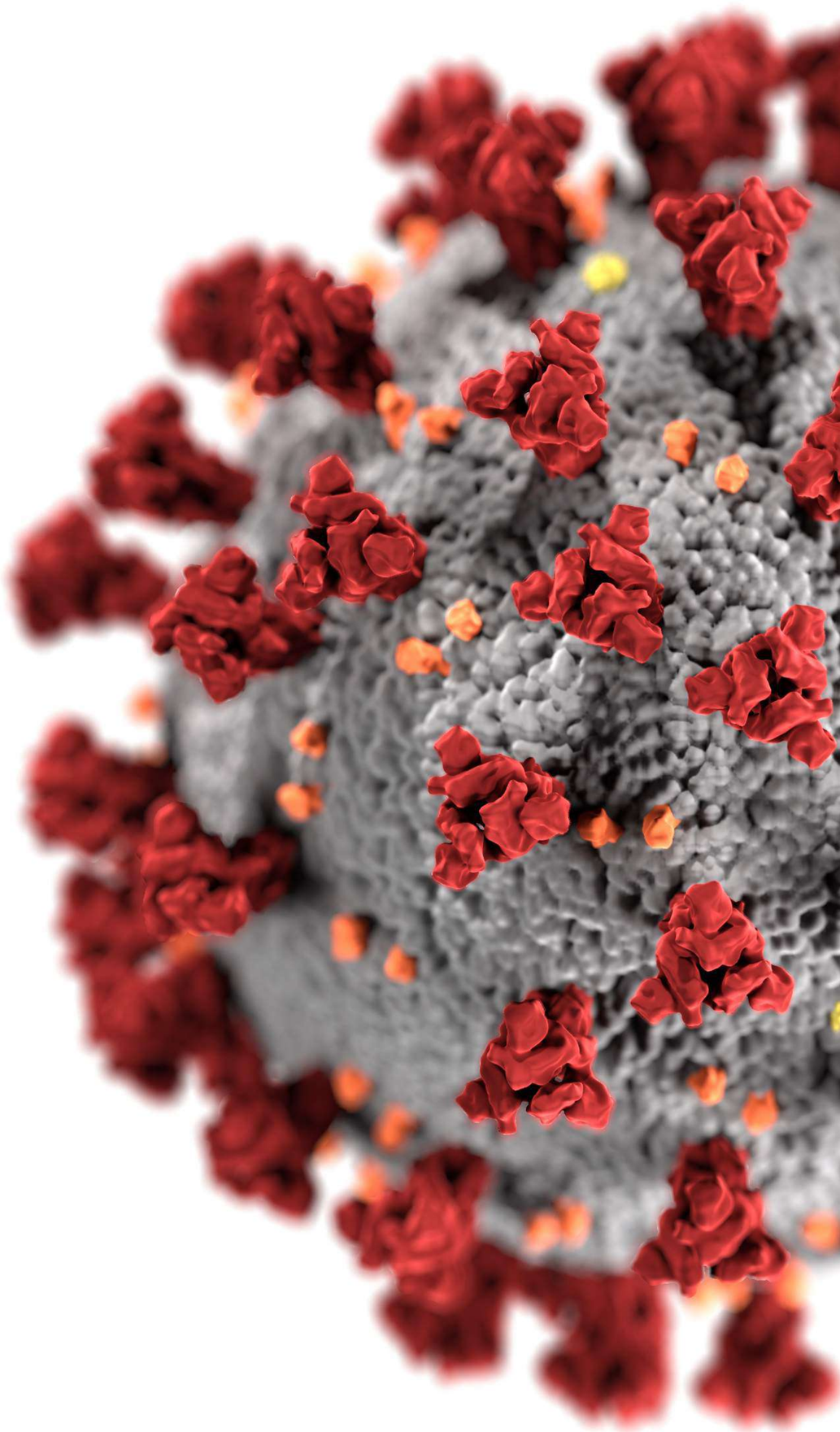
This not only gives you theoretical knowledge but also the learning experience. Keeping the current situation in the mind, work from home internships are offered. What we have to do is to make use of all those stuffs. Programming languages like C, C++, Java, python etc... Play a vital role in the world. Many organizations took effort to teach coding languages for the betterment of young buds. For kids also, they are providing basic programming stuffs. Parents and teachers teach alphabets when a kid starts to go to school. Likewise, it is necessary to teach a kid programming languages to become a successful coder. I don't know how many of us are learning programming languages. If we want to know what is happening in the pond of Techy world, we have to learn. If we play a pubg or a ludo king, we should know what is running behind the screen.



These hidden stuffs can be taught by several organizations in online mode. If we want to teach regular subjects or programming languages, we can apply for the post via online and we will teach via online mode. It gives hands when we chase our dreams. We can be the toppings of pizza, but we should make the base of the pizza dough strong. Likewise if we want to shine in the Techy world, we should be strong enough in the basics. Some students don't have enough gadgets to do online studies so what we can do is to teach scheduled courses via television by creating a new educational channel. This might be helpful for those who needs to learn and don't have Internet connection. Now, several teams have started online cookery classes. It is more beneficial for all as they teach all cuisines like Chinese, Japanese, south Indian, North Indian etc...

Social Medias are not only for posting pictures and sharing our stories, it has become edutainment platform. We can learn gardening via online. They are teaching like When to plant a tree and where to plant a tree. This will be useful for all who loves to do terrace garden where we can sow seeds whatever we wish to do. Students can also choose their respective passion and gain knowledge through online courses. This will be helpful for students to reach their success tree. I hope we all will definitely grab this golden opportunity of attending online courses and step into the success dais.

Sindhuja R
3rd year B



QUANTUM COMPUTING

A quantum computer is a device for computation that makes use of quantum mechanical properties, such as superposition and entanglement, to perform operations on data. In a classical (or conventional) computer, information is stored as bits; in a quantum computer, it is stored as qubits (quantum bits). A Classical bit can be either zero or one. A Qubit can be both zero & one at the same time. Qubits have few quantum properties, in a entangled state connected group of qubits can provide way more processing power than the same number of binary bits.

Many objects can be used as a Qubit, like a single photon, a nucleus, or an electron. The object(Qubit) exists in a superposition where there is both 1 & 0, but when it is measured it collapses into either 1 or 0. The collapse is due to Quantum Decoherence. Quantum computers can be extremely advantageous for certain tasks where they could vastly outperform even our best supercomputers. In situations where there are a large number of possible combinations, quantum computers canconsider them simultaneously. Qubits can represent numerous possible combinations of 1 and 0 at the same time. This ability to simultaneously be in multiple states is called superposition. To put qubits into superposition, it is manipulated by using precision lasers or microwave beams.

Due to this phenomenon, a quantum computer with several qubits in superposition can calculate a vast number of potential outcomes simultaneously. Pairs of qubits can be generated that are “entangled,” which means the two members of a pair exist in a single quantum state. Changing the state of one of the qubits will instantaneously change the state of the other one predictably. This happens even if they are separated by very long distances. Quantum computers harness the Entanglement property, adding extra qubits to a quantum machine produces an exponential increase in its calculation abilities. Using a classical machine will still be the easiest and most economical solution for tackling most problems.

Basic works like browsing web pages or watching movies will be the same in classical computers and quantum computers, there won't be any noticeable difference/improvements between them. The basic works can be even slower in a Quantum computer. But quantum computers promise to power exciting advances in various fields, in materials science, for pharmaceuticals research, to develop things like lighter and more powerful batteries for electric cars and to help create novel drugs, Creating & Re-creating molecular structures. With the use of Shor's Algorithm, a quantum computer could break most of the currently used Cryptography systems. In particular, most of the popular public-key ciphers are based on the difficulty of factoring integers, including forms of RSA.

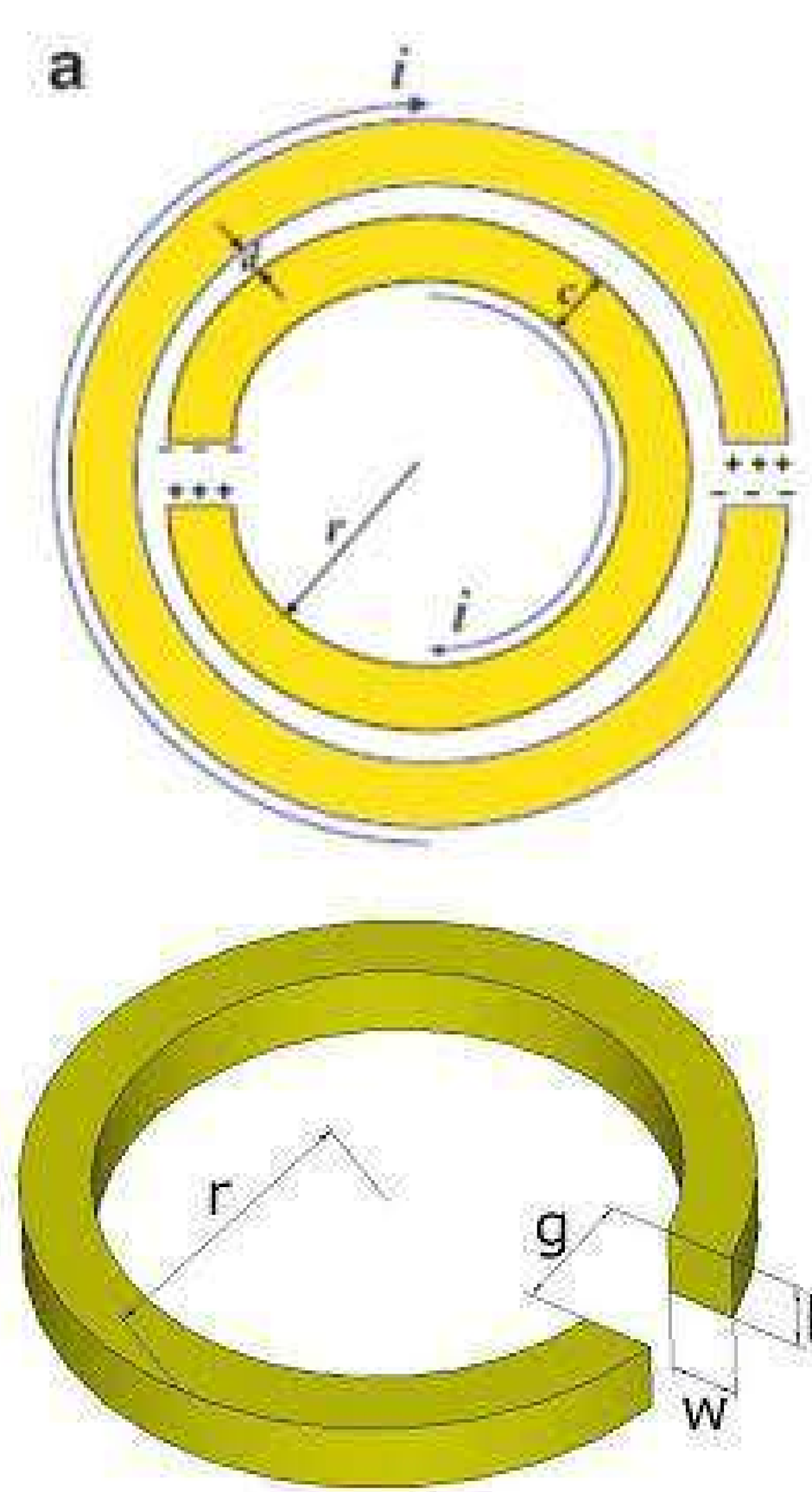
The interaction of qubits with their environment in ways that cause their quantum behavior to decay and ultimately disappear is called decoherence. Their quantum state is extremely fragile. The slightest vibration or change in temperature disturbances are known as “noise” can cause them to fall out of superposition before their job has been properly done. It’s the point at which a quantum computer can complete a mathematical calculation that is demonstrably beyond the reach of even the most powerful supercomputer.

Sivaganesh T
3rd year B

SPLIT-RING RESONATORS

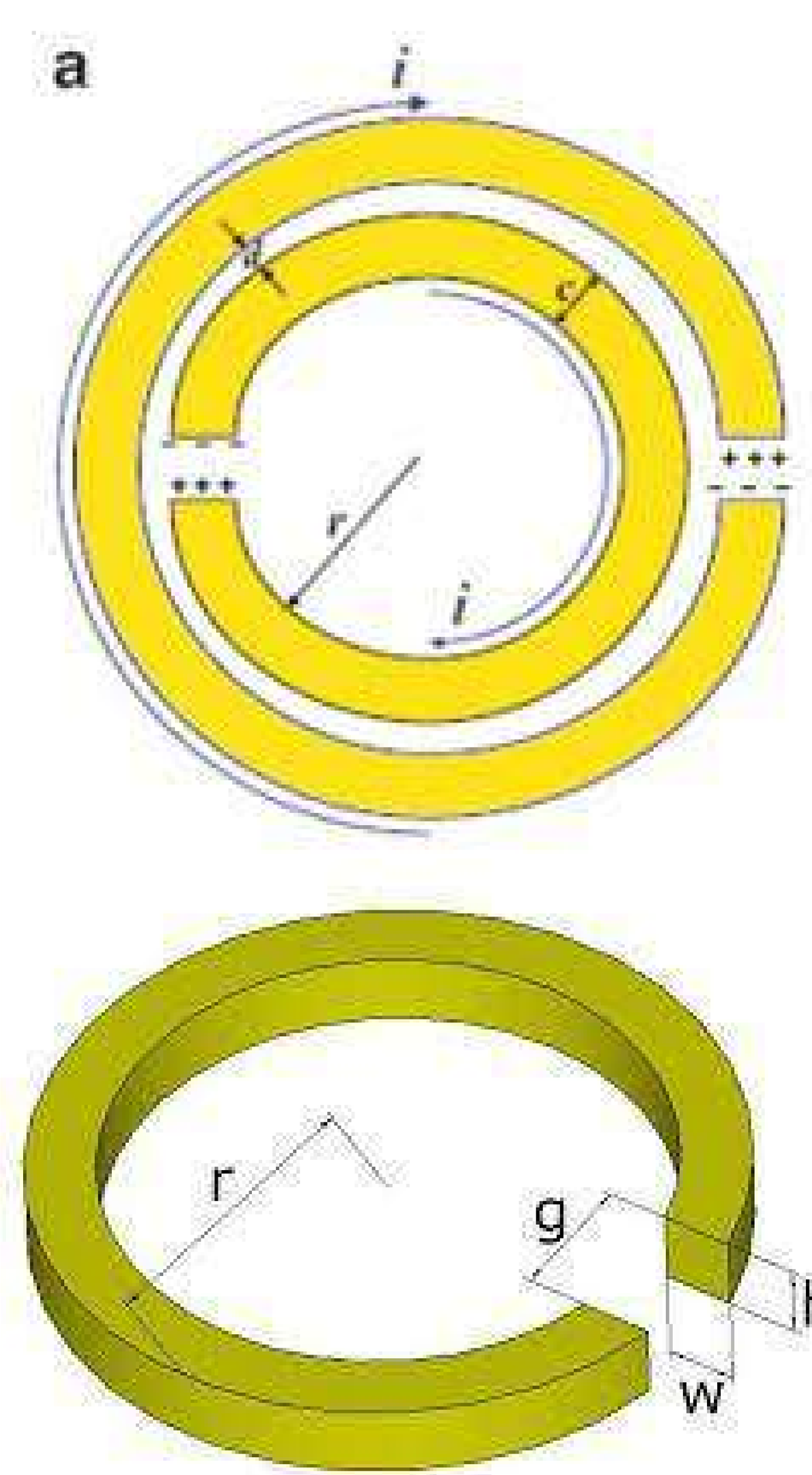
Split-ring resonators (SRRs) consist of two or more concentric metallic rings in a circular or square shape, etched on the dielectric substrate. They have splits or gaps at opposite ends. The splits are the structural in homogeneities that help the SRRs support resonant wavelengths much greater than the diameter of the rings.

The capacitance formed by the splits in the rings is large in value. As the capacitance is inversely proportional to the resonant frequency, a large capacitance helps the resonator exhibit resonance at frequencies considerably greater than its dimension. The resonant wavelength is much higher than the dimension of the SRR, and therefore, quality improves.



SPLIT-RING RESONATORS

- SRRs have the advantage of having low radiative losses. They have negative effective permeability at frequencies closer to the resonant frequency and have been used to make left-handed media with the negative refractive index.
- When a uniform, time-varying magnetic field is applied perpendicular to the rings, current loops at resonance are generated. The large capacitance from the splits completes the closed-loop for current circulation and the SRR behaves like an LC resonator. The current circulation and large capacitance supported by the resonance phenomenon reduces the electric size of the resonator.

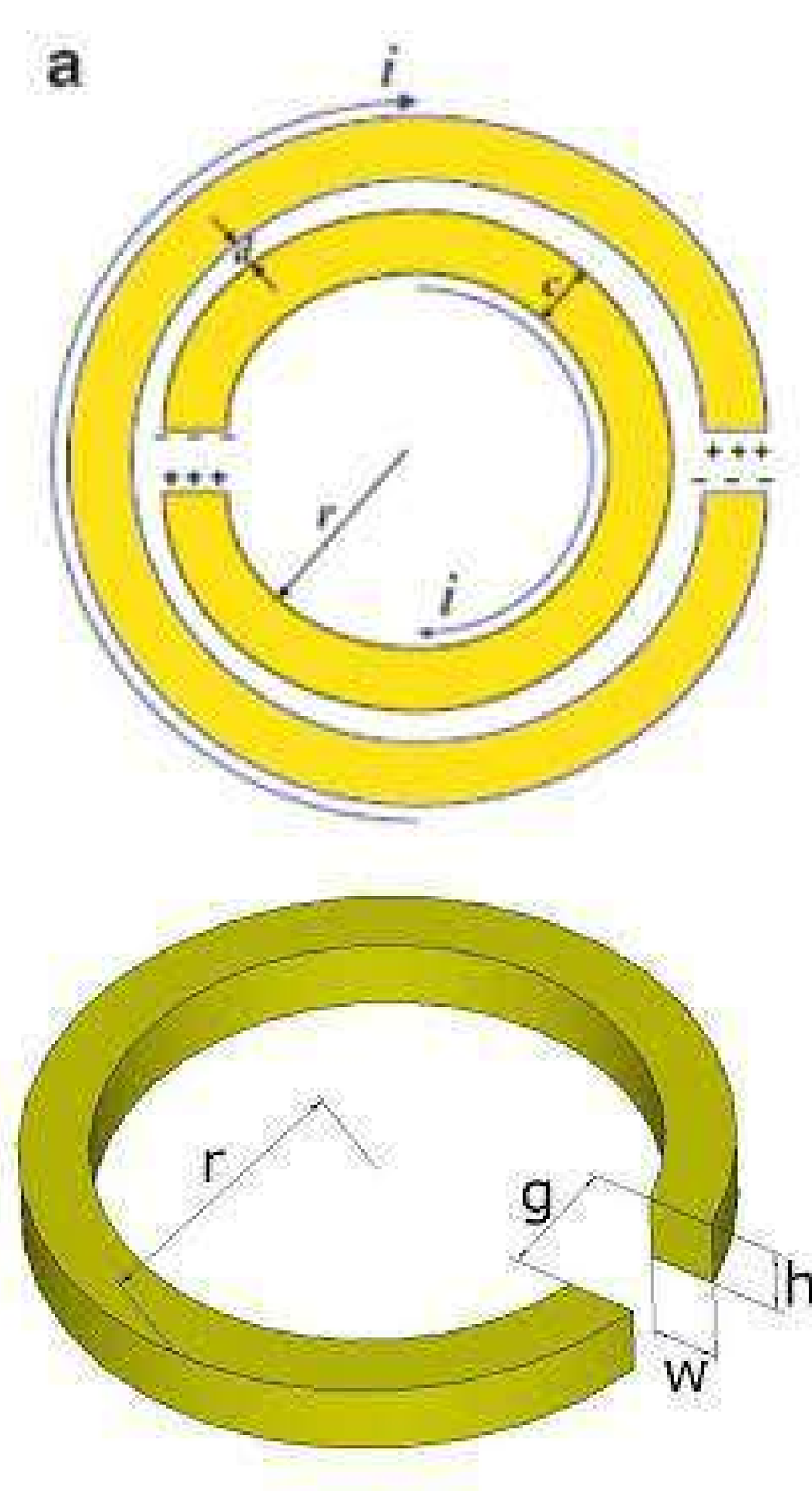


SPLIT-RING RESONATORS

The resonant frequency depends on the LC values and is given by:

$$f_r = \frac{1}{2\pi\sqrt{LC_{total}}}$$

The shape of the split rings plays an important role in the properties of SRRs. Under a similar footprint, the frequency shift is different for circular, square, and hexagonal SRRs. The same shape effect is also seen on the equivalent L and C values, which are dependent on the dimensions of the split-rings. A variation of L and C can be made by modifying the SRR structure.



For a single split-ring resonator, the inductance is dependent on the constructional parameters and is expressed as:

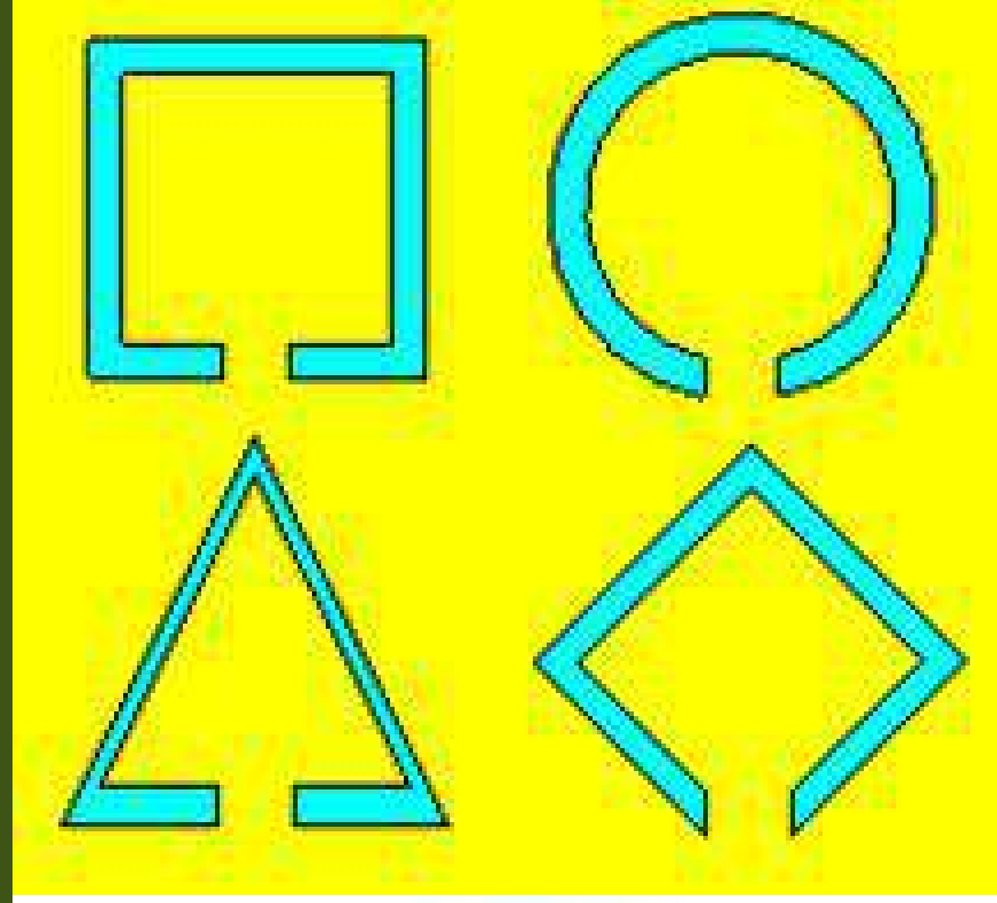
$$L = \mu_0 (R + \frac{w}{2})(ln \frac{8(R+\frac{w}{2})}{h+w} - 0.5)$$

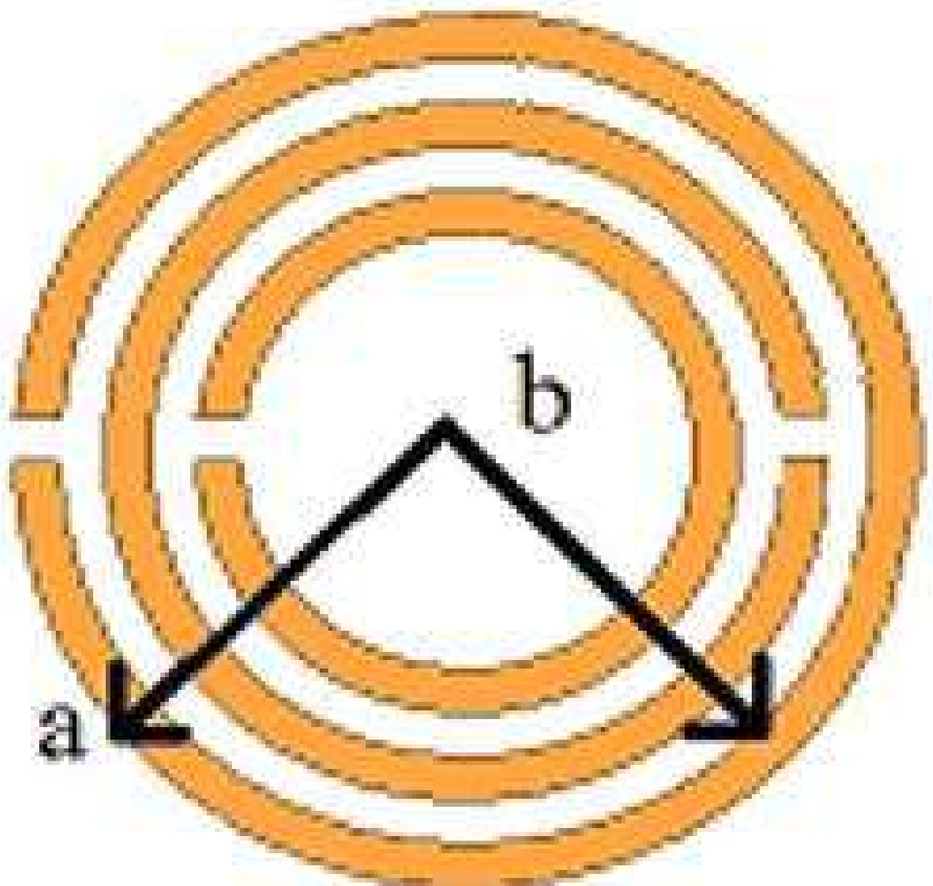
The two capacitances—gap capacitance and surface capacitance—can be given by,

$$C_{gap} = \varepsilon_o [\frac{wh}{g} + \frac{2\pi h}{ln(\frac{2.4h}{w})}]$$

The total capacitance of the resonator is equal to

$$C_{total} = C_{gap} + C_{surface}$$





Thenmozhi A
3rd year B

NANOTECHNOLOGY

Nanotechnology is science, engineering, and technology conducted at the nanoscale, which is about 1 to 100 nanometers. Physicist Richard Feynman is the father of nanotechnology. One nanometer is a billionth of a meter, or 10-9 of a meter. There are 25,400,000 nanometers in an inch. A sheet of newspaper is about 100,000 nanometers thick. On a comparative scale, if a marble were a nanometer, then one meter would be the size of the Earth. There are four main types of intentionally produced nanomaterials: carbon-based, metal-based, dendrimers, and nanocomposites. Carbon-based nanomaterials are intentionally produced fullerenes

NANOTECHNOLOGY

Nanotechnology is improving the efficiency of fuel production from raw petroleum materials through better catalysis. It is also enabling reduced fuel consumption in vehicles and power plants through higher-efficiency combustion and decreased friction. Nanotechnology offers the potential for new and faster kinds of computers, more efficient power sources and life-saving medical treatments. Potential disadvantages include economic disruption and possible threats to security, privacy, health and the environment. Nanotechnology is an advance technique which has progressively entered in the everyday life, conquering an increased importance in many fields.

NANOTECHNOLOGY

With nanotechnology more useful devices, better drugs for diseases, more appropriate materials for construction will be developed. Nanotechnology has been widely studied for its potential to advance the field of biotechnology and medical research. Regulatory agencies such as the FDA have decided to oversee the emerging field of nanotechnology through existing legislative arrangements.

Shasini M
3rd year B

PHOTOGRAPHY

Karthiga Devi G
3rd year A

Shruthi P.S
2nd year B

Varadakrishnan B
3rd year B

Varadakrishnan B
3rd year B

POEM

MICROPROCESSOR

I am a Microprocessor,
seems to be programmed for execution,
still not tired of being a processor,
Since,I am updated from a remarkable 8086,
To,a trendy version so called ci7 processor,
WOW!! It sounds great,right....
inventions does'nt make me buffered,
rather it makes me an Amazing device.

Karthiga Devi G
3rd year A

ART WORKS

Pavithra B
3rd year B

Karthika Mohan
1st year A

Ratna M
3rd year B

Karthika Mohan
1st year A

Vibushitha M S
3rd year B

FROM EDITOR'S DESK

Kaviya S
3rd year A

Kumaragurupharan S
3rd year A

It gives us great pleasure in editing this issue of WIZARDZZ Volume 18, the ECE department magazine. This magazine is a platform which helps to engage the students and faculty by publishing their creative content regularly, by organizing competitions, and through continued and rapid reporting about college events. We would like to seize this golden oppurtunity to convey our heartfelt gratitude to the management, Principal and our faculty members for the love and care they showered on us and they have provided us with their presence and their helpful hands. Especially we would like to express our gratitude to our dynamic HOD Dr. M.Santhi for giving us this oppurtunity and Dr. S.A.Arunmozhi for being a driving force in this venture. Last but not least we would like to thank our department students who have contributed to this magazine.
The team hopes to build on this ethos just as much during the upcoming academic year.

Sindhuja R
3rd year B

Sivaram R
3rd year B

Thank you